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# The Torch-Bearers





# The Torch-Bearers

VOL. I.

THE WATCHERS OF THE SKY

BY

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## PREFATORY NOTE.

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THIS volume, while it is complete in itself, is also the first of a trilogy, the scope of which is suggested in the prologue. The story of scientific discovery has its own epic unity—a unity of purpose and endeavour—the single torch passing from hand to hand through the centuries; and the great moments of science when, after long labour, the pioneers saw their accumulated facts falling into a significant order—sometimes in the form of a law that revolutionised the whole world of thought—have an intense human interest and belong essentially to the creative imagination of poetry. It is with these moments that my poem is chiefly concerned, not with any impossible attempt to cover the whole field or to make a new poetic system, after the Lucretian model, out of modern science.

The theme has been in my mind for a good many years; and the first volume, dealing with the 'Watchers of the Sky,' began to take definite shape during what was to me an unforgettable experience—the night I was privileged to spend on a summit of the Sierra Madre Mountains, when the first trial was made of the new 100-inch telescope. The prologue to this volume attempts to give a picture of that night, and to elucidate my own purpose.

The first tale in this volume plunges into the middle of things, with the revolution brought about by Copernicus ; but, within the tale, partly by means of an incidental lyric, there is an attempt to give a bird's-eye view of what had gone before. The torch then passes to Tycho Brahe, who, driven into exile with his tables of the stars, at the very point of death hands them over to a young man named Kepler. Kepler, with their help, arrives at his own great laws, and corresponds with Galileo—the intensely human drama of whose life I have endeavoured to depict with more historical accuracy than can be attributed to much of the poetic literature that has gathered around his name. Too many writers have succumbed to the temptation of the cry, “*E pur si muove!*” It is, of course, rejected by every reliable historian, and was first attributed to Galileo a hundred years after his death. M. Ponsard, in his play on the subject, succumbed to the extent of making his final scene end with Galileo “*frappant du pied la terre,*” and crying, “*pourtant elle tourne.*” Galileo’s recantation was a far more subtle and tragically complicated affair than that. Even Landor succumbed to the easy method of making him display his entirely legendary scars to Milton. If these familiar pictures are not to be found in my poem, it may be well for me to assure the hasty reader that it is because I have endeavoured to present a more just picture. I have tried to suggest the complications of motive in this section by a series of letters passing between the characters chiefly concerned. There was, of course, a certain poetic significance in the legend of “*E pur si muove*”; and this significance

I have endeavoured to retain without violating historical truth.

In the year of Galileo's death Newton was born, and the subsequent sections carry the story on to the modern observatory again. The form I have adopted is a development from that of an earlier book, 'Tales of the Mermaid Tavern,' where certain poets and discoverers of another kind were brought together round a central idea, and their stories told in a combination of narrative and lyrical verse. 'The Torch-Bearers' flowed all the more naturally into a similar form in view of the fact that Tycho Brahe, Kepler, and many other pioneers of science wrote a considerable number of poems. Those imbedded in the works of Kepler—whose blazing and fantastic genius was, indeed, primarily poetic—are of extraordinary interest. I was helped, too, in the general scheme by those constant meetings between science and poetry, of which the most famous and beautiful are the visit of Sir Henry Wotton to Kepler, and the visit of Milton to Galileo in prison.

Even if science and poetry were as deadly opposites as the shallow often affirm, the method and scheme indicated above would at least make it possible to convey something of the splendour of the long battle for the light in its most human aspect. Poetry has its own precision of expression, and, in modern times, it has been seeking more and more for truth, sometimes even at the expense of beauty. May it not be possible to carry that quest a stage farther, to the point where, in the great rhythmical laws of the universe revealed by science, truth and beauty are reunited. If poetry can do this, it will not be

without some value to science itself, and it will be playing its part in the reconstruction of a shattered world.

The passing of the old order of dogmatic religion has left the modern world in a strange chaos, craving for something in which it can unfeignedly believe, and often following will-o'-the-wisps. Forty years ago, Matthew Arnold prophesied that it would be for poetry, "where it is worthy of its high destinies," to carry on the purer fire, and to express in new terms those eternal ideas which must ever be the only sure stay of the human race. It is not within the province of science to attempt a post-Copernican justification of the ways of God to man; but, in the laws of nature revealed by science, and in "that grand sequence of events which"—as Darwin affirmed—"the mind refuses to accept as the result of blind chance," poetry may discover its own new grounds for the attempt. It is easy to assume that all hope and faith are shallow. It is even easier to practise a really shallow and devitalising pessimism. The modern annunciation that there is a skeleton an inch beneath the skin of man is neither new nor profound. Neither science nor poetry can rest there; and if, in this poem, an attempt is made to show that spiritual values are not diminished or overwhelmed by the "fifteen hundred universes" that passed in review before the telescope of Herschel, it is only after the opposite argument—so common and so easy to-day—has been faced; and only after poetry has at least endeavoured to follow the torch of science to its own deep-set boundary-mark in that immense darkness of Space and Time.

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# The Torch-Bearers.



## PROLOGUE.

### THE OBSERVATORY.

AT noon, upon the mountain's purple  
height,

Above the pine-woods and the clouds it  
shone

No larger than the small white dome of  
• shell

Left by the fledgling wren when wings are  
born.

By night it joined the company of heaven,  
And, with its constant light, became a  
star.

A needle-point of light, minute, remote,  
It sent a subtler message through the  
abyss,

Held more significance for the seeing eye  
Than all the darkness that would blot it  
out,

Yet could not dwarf it.

High in heaven it shone,  
Alive with all the thoughts, and hopes, and  
dreams

Of man's adventurous mind.

Up there, I knew  
The explorers of the sky, a quiet throng  
Of pioneers, made ready to attack  
That darkness once again, and win new  
worlds.

To-morrow night they hoped to crown the  
toil

Of twenty years, and turn upon the  
sky

The noblest weapon ever made by man.

War had delayed them. They had been  
drawn away

Designing darker weapons. But no gun  
Could outrange this.

“ To-morrow night ”—so wrote their chief  
—“ we try

Our great new telescope, the hundred-inch.  
Your Milton’s ‘ optic tube ’ has grown in  
power

Since Galileo, famous, blind, and old,  
Talked with him, in that prison, of the  
sky.

We creep to power by inches. Europe  
trusts

Her ‘ giant forty ’ still. Even to-night  
Our own old sixty has its work to do ;  
And now our hundred-inch . . . I hardly  
dare

To think what this new muzzle of ours  
may find.

Come up, and spend that night among the  
stars

Here, on our mountain-top. If all goes  
well,

Then, at the least, my friend, you'll see a  
moon

Stranger, but nearer, many a thousand mile  
Than earth has ever seen her, even in  
dreams.

As for the stars, if seeing them were all,  
Three thousand million new-found points .  
of light

Is our rough guess. But never speak of  
this.

You know our press. They'd miss the  
one result

To flash 'three thousand millions' round  
the world."

To-morrow night ! For more than twenty  
years

They had thought and planned and worked. .  
Ten years had gone,

One-fourth, or more, of man's brief working-  
life,

Before they made those solid tons of glass,  
Their hundred-inch reflector, the clear  
pool,

The polished flawless pool that it must be  
To hold the perfect image of a star.  
And, even now, some secret flaw—none  
knew  
Until to-morrow's test—might waste it all.  
Where was the gambler that would stake  
so much,—  
Time, patience, treasure, on a single throw ?  
The cost of it,—they'd not find that  
again,  
Either in gold or life-stuff ! All their  
youth  
Was fuel to the flame of this one work.  
Once in a lifetime to the man of science,  
Despite what fools believe his ice-cooled  
blood,  
There comes this drama.  
If he fails, he fails  
Utterly. He at least will have no time  
For fresh beginnings. Other men, no  
doubt,  
Years hence, will use the footholes that he  
cut

In those precipitous cliffs, and reach the  
height,

But he will never see it.

So for me,  
The light words of that letter seemed to  
hide

The passion of a lifetime, and I shared  
The crowning moment of its hope and fear.

Next day, through whispering aisles of  
palm we rode

Up to the foot-hills, dreaming desert-hills  
That to assuage their own delicious drought  
Had set each tawny sun-kissed slope ablaze  
With peach and orange orchards.

Up and up,  
Along the thip white trail that wound and  
climbed

And zig-zagged through the grey-green  
mountain sage,

The car went crawling, till the shining  
plain

Below it, like an airman's map, unrolled.

Houses and orchards dwindled to white  
specks  
In midget cubes and squares of tufted  
green.  
Once, as we rounded one steep curve, that  
made  
The head swim at the canyoned gulf  
below,  
We saw through thirty miles of lucid air  
Elvishly small, sharp as a crumpled petal  
Blown from the stem, a yard away, a sail  
Lazily drifting on the warm blue sea.  
Up for nine miles along that spiral trail  
Slowly we wound to reach the lucid  
height  
Above the clouds, where that white dome  
of shell,  
No wren's now, but an eagle's, took the  
flush  
Of dying day. The sage-brush all died  
out,  
And all the southern growths, and round  
us now,



Firs of the north, and strong, storm-  
rooted pines

Exhaled a keener fragrance ; till, at last,

Reversing all the laws of lesser hills,

They towered like giants round us. Dark-  
ness fell

Before we reached the mountain's naked,  
height.

Over us, like some great cathedral dome,

The observatory loomed against the sky ;

And the dark mountain with its headlong  
gulfs

Had lost all memory of the world below ;

For all those cloudless throngs of glitter-  
ing stars,

And all those glimmerings where the abyss  
of space

Is powdered with a milky dust, each grain

A burning sun, and every sun the lord

Of its own darkling planets,—all those  
lights

Met, in a darker deep, the lights of earth,

Lights on the sea, lights of invisible towns,  
Trembling and indistinguishable from stars,  
In those black gulfs around the mountain's  
feet.

Then, into the glimmering dome, with  
bated breath,

We entered, and, above us, in the gloom  
Saw that majestic weapon of the light  
Uptowering like the shaft of some huge gun  
Through one arched rift of sky.

Dark at its base  
With naked arms, the crew that all day  
long

Had sweated to make ready for this night  
Waited their captain's word.

The switchboard shone  
With elfin lamps of white and red, and keys  
Whence, at a finger's touch, that mon-  
strous tube

Moved like a creature dowered with life  
and will,

To peer from deep to deep.

Below it pulsed

The clock-machine that slowly, throb by  
throb,

Timed to the pace of the revolving earth,  
Drove the titanic muzzle on and on,  
Fixed to the chosen star that else would  
glide  
Out of its field of vision.

So, set free  
Balanced against the wheel of time, it  
swung,  
Or rested, while, to find new realms of  
sky  
The dome that housed it, like a moon  
revolved,  
So smoothly that the watchers hardly  
knew  
They moved within; till, through the  
glimmering doors,  
They saw the dark procession of the pines  
Like Indian warriors, quietly stealing by.

Then, at a word, the mighty weapon  
dipped

Its muzzle and aimed at one small point of  
light,  
One seeming insignificant star.

The chief,  
Mounting the ladder, while we held our  
breath,

Looked through the eye-piece.

Then we heard him laugh  
His thanks to God, and hide it in a jest.

“ A prominence on Jupiter ! ”—

They laughed,  
“ What do you mean ? ”—“ It’s moving,”  
cried the chief,

They laughed again, and watched his  
glimmering face

High overhead against that moving tower.

“ Come up and see, then ! ”

One by one they went,  
And, though each laughed as he returned  
to earth,

Their souls were in their eyes.

Then I, too, looked,  
And saw that insignificant spark of light

Touched with new meaning, beautifully  
reborn,

A swimming world, a perfect rounded pearl,  
Poised in the violet sky ; and, as I gazed,  
I saw a miracle,—right on its upmost  
edge

A tiny mound of white that slowly rose, .  
Then, like an exquisite seed-pearl, swung  
quite clear

And swam in heaven above its parent  
world

To greet its three bright sister-moons.

A moon,  
Of Jupiter, no more, but clearer far  
Than mortal eyes had seen before from  
earth.

Beautiful, keen and clear beyond all dreams  
Was that one silver phrase of the starry  
tune

Which Galileo's " old discoverer " first  
Dimly revealed, dissolving into clouds  
The imagined fabric of our universe.

*" Jupiter stands in heaven and will stand*

*Though all the sycophants bark at him,"* he  
cried,  
Hailing the truth before he, too, went  
down,  
Whelmed in the cloudy wreckage of that  
dream.

•  
So one by one we looked, the men who  
served  
Urania, and the men from Vulcan's forge.  
A beautiful eagerness in the darkness lit  
The swarthy faces that too long had  
missed  
A meaning in the dull mechanic maze  
Of labour on this blind earth, but found it  
now.  
Though only a moment's wandering melody  
Hopelessly far above, it gave their toil  
Its only consecration and its joy.  
There, with dark-smouldering eyes and  
naked throats,  
Blue-dungareed, red-shirted, grimed and  
smeared

With engine-grease and sweat, they gathered round  
The foot of that dim ladder ; each muttering low  
As he came down, his wonder at what he saw  
To those who waited,—a picture for the brush  
Of Rembrandt, lighted only by the rift  
Above them, where the giant muzzle thrust  
Out through the dim arched roof, and slowly throbbed,  
Against the slowly moving wheel of the earth,  
Holding their chosen star.

There, like an elf,  
Perched on the side of that dark slanting tower,  
The Italian mechanic watched the moons  
That Italy discovered.

One by one,

English, American, French, and Dutch,  
they climbed  
To see the wonder that their own blind  
hands  
Had helped to achieve.

At midnight while they paused  
To adjust the clock-machine, I wandered  
out

Alone, into the silence of the night.

The silence? On that lonely height I  
heard

Eternal voices ;

For, as I looked into the gulf beneath,  
Whence almost all the lights had vanished  
now,

The whole dark mountain seemed to have  
lost its earth

And to be sailing like a ship through  
heaven.

All round it surged the mighty sea-like  
sound

Of soughing pine-woods, one vast ebb and  
flow



Of absolute peace, aloof from all earth's  
pain,

So calm, so quiet, it seemed the cradle-  
song,

The deep soft breathing of the universe  
Over its youngest child, the soul of man.

And, as I listened, that Æolian voice

Became an invocation and a prayer :

O you, that on your loftier mountain  
dwell

And move like light in light among the  
thoughts

Of heaven, translating our mortality

Into immortal song, is there not one

Among you that can turn to music now

This long dark fight for truth ? Not one  
to touch

With beauty this long battle for the light,

This little victory of the spirit of man

Doomed to defeat—for what was all we  
saw

To that which neither eyes nor soul could  
see ?—

Doomed to defeat and yet unconquerable,  
Climbing its nine miles nearer to the stars.  
Wars we have sung. The blind, blood-  
boltered kings

Move with an epic music to their thrones.  
Have you no song, then, of that nobler  
war ?

Of those who strove for light, but could  
not dream

Even of this victory that they helped to  
win,

Silent discoverers, lonely pioneers,  
Prisoners and exiles, martyrs of the truth  
Who handed on the fire, from age to age ;  
Of those who, step by step, drove back  
the night

And struggled, year on year, for one more  
glimpse

Among the stars, of sovran law, their  
guide ;

Of those who searching inward, saw the  
rocks

Dissolving into a new abyss, and saw

Those planetary systems far within,  
Atoms, electrons, whirling on their way  
To build and to unbuild our solid world ;  
Of those who conquered, inch by difficult  
    inch,  
The freedom of this realm of law for man ;  
Dreamers of dreams, the builders of our  
    hope,  
The healers and the binders up of wounds,  
Who, while the dynasts drenched the world  
    with blood,  
Would in the still small circle of a lamp  
Wrestle with death like Heracles of old  
To save one stricken child.

Is there no song  
To touch this moving universe of law  
With ultimate light, the glimmer of that  
great dawn  
Which over our ruined altars yet shall  
break  
In purer splendour, and restore mankind  
From darker dreams than even Lucretius  
knew,

To vision of that one Power which guides  
the world.

How should men find it? Only through  
those doors

Which, opening inward, in each separate soul  
Give each man access to that Soul of all  
Living within each life, not to be found  
Or known, till, looking inward, each alone  
Meets the unknowable and eternal God.

And there was one that moved like light  
in light

Before me there,—Love, human and divine,  
That can exalt all weakness into power,—  
Whispering, *Take this deathless torch of  
song . . .*

Whispering, but with such faith, that  
even I

Was humbled into thinking this might be  
Through love, though all the wisdom of  
the world

Account it folly.

Let my breast be bared

To every shaft, then, so that Love be still  
My one celestial guide the while I sing  
Of those who caught the pure Promethean  
fire

One from another, each crying as he went  
down

To one that waited, crowned with youth  
and joy,—

*Take thou the splendour, carry it out of sight  
Into the great new age I must not know,  
Into the great new realm I must not tread.*

## I.

## COPERNICUS.

THE neighbours gossiped idly at the door.  
 Copernicus lay dying overhead.  
 His little throng of friends, with startled  
     eyes,  
 Whispered together, in that dark house of  
     dreams,  
 From which by one dim crevice in the wall  
 He used to watch the stars.  
                                 “ His book has come  
 From Nuremberg at last ; but who would  
     dare  
 To let him see it now ? ”—  
                                 “ They have altered it !  
 Though Rome approved in full, this pre-  
     face, look,

Declares that his discoveries are a  
dream ! ”—

“ He has asked a thousand times if it has  
come ;

Could we tear out those pages ? ”—

“ He’d suspect.”—

“ What shall be done, then ? ”—

“ Hold it back awhile.

That was the priest’s voice in the room  
above.

He may forget it. Those last sacraments  
May set his mind at rest, and bring him  
peace.”—

Then, stealing quietly to that upper door,  
They opened it a little, and saw within  
The lean white deathbed of Copernicus  
Who made our world a world without an  
end.

There, in that narrow room, they saw his  
face

Grey, seamed with thought, lit by a single  
lamp ;

They saw those glorious eyes

Closing, that once had looked beyond the  
spheres  
And seen our ancient firmaments dissolve  
Into a boundless night.

Beside him knelt  
Two women, like bowed shadows. At his  
feet,  
An old physician watched him. At his  
head,  
The cowed Franciscan murmured, while  
the light  
Shone faintly on the chalice.

All grew still.  
The fragrance of the wine was like faint  
flowers,  
The first breath of those far celestial  
fields. . . .

Then, like a dying soldier, that must leave  
His last command to others, while the  
fight  
Is yet uncertain, and the victory far,  
Copernicus whispered, in a fevered dream,



“Yes, it is Death. But you must hold  
him back,

There, in the doorway, for a little while,

Until I know the work is rightly done.

Use all your weapons, doctor. I must live

To see and touch one copy of my book.

Have they not brought it yet ?

They promised me

It should be here by nightfall.

One of you go

And hasten it. I can hold back Death

till dawn.

Have they not brought it yet ?—from  
Nuremberg.

Do not deceive me. I must know it safe,

Printed and safe, for other men to use.

I could die then. My use would be fulfilled.

What has delayed them ? Will not some  
one go

And tell them that my strength is running  
out ?

Tell them that book would be an angel's  
hand

In mine, an easier pillow for my head,  
A little lantern in the engulfing dark.  
You see, I hid its struggling light so long  
Under too small a bushel, and I fear  
It may go out for ever. In the noon  
Of life's brief day, I could not see the need  
As now I see it, when the night shuts down.  
I was afraid, perhaps, it might confuse  
The lights that guide us for the souls of  
men.

But now I see three stages in our life.  
At first, we bask contented in our sun  
And take what daylight shows us for the  
truth.

Then we discover, in some midnight grief,  
How all day long the sunlight blinded us  
To depths beyond, where all our know-  
ledge dies.

That's where men shrink, and lose their  
way in doubt.

Then, last, as death draws nearer, comes  
a night

In whose majestic shadow men see God,  
Absolute Knowledge, reconciling all.

So, all my life I pondered on that  
scheme

Which makes this earth the centre of all  
worlds,

Lighted and wheeled around by sun and  
moon

And that great crystal sphere wherein  
men thought

Myriads of lesser stars were fixed like  
lamps,

Each in its place,—one mighty glittering  
wheel

Revolving round this dark abode of man.

Night after night, with even pace they  
moved,

Year after year, not altering by one point,  
Their order, or their stations, those fixed  
stars

In that revolving firmament. The Plough

Still pointed to the Pole. Fixed in their  
sphere,

How else explain that vast unchanging  
wheel ?

How, but by thinking all those lesser  
lights

Were huger suns, divided from our earth  
By so immense a gulf that, if they moved  
Ten thousand leagues an hour among  
themselves,

It would not seem one hair's-breadth to  
our eyes.

Utterly inconceivable, I know ;

And yet we daily kneel to boundless  
Power

And build our hope on that Infinitude.

This did not daunt me, then. Indeed, I  
saw

Light upon chaos. Many discordant dreams  
Began to move in lucid music now.

For what could be more baffling than the  
thought

That those enormous heavens must circle  
earth

Diurnally—a journey that would need  
Swiftness to which the lightning-flash would  
seem

A white slug creeping on the walls of night ;  
While, if earth softly on her axle spun  
One quiet revolution answered all.

It was our moving selves that made the  
sky

Seem to revolve. Have not all ages seen  
A like illusion baffling half mankind  
In life, thought, art ? Men think, at every  
turn

Of their own souls, the very heavens have  
moved.

Light upon chaos, light, and yet more  
light ;

For—as I watched the planets—Venus,  
Mars,

Appeared to wax and wane from month to  
month

As though they moved, now near, now far,  
from earth.

Earth could not be their centre. Was the  
sun

Their sovran lord then, as Pythagoras  
held ?

Was this great earth, so stablished, so  
secure,

A planet also ? Did it also move

Around the sun ? If this were true, my  
friends,

No revolution in this world's affairs,

Not that blind maelstrom where imperial  
Rome

Went down into the dark, could so engulf

All that we thought we knew. We who  
believed

In our own majesty, we who walked with  
gods

As younger sons on this proud central  
stage,

Round which the whole bright firmament  
revolved

For our especial glory, must we creep  
Like ants upon our midget ball of dust  
Lost in immensity ?

I could not take  
That darkness lightly. I withheld my book  
For many a year, until I clearly saw,  
And Rome approved me—have they not  
brought it yet ?—

That this tremendous music could not  
drown

The still supernal music of the soul,  
Or quench the light that shone when  
Christ was born.

For who, if one lost star could lead the  
kings

To God's own Son, would shrink from  
following these

To His eternal throne ?

This at the least  
We know, the soul of man can soar through  
heaven.

It is our own wild wings that dwarf the  
world

To nothingness beneath us. Let the soul  
Take courage, then. If its own thought  
    be true,  
Not all the immensities of little minds  
Can ever quench its own celestial fire.

No. This new night was needed, that the  
    soul  
Might conquer its own kingdom and arise  
To its full stature. So, in face of death,  
I saw that I must speak the truth I knew.

Have they not brought it ? What delays  
    my book ?  
I am afraid. Tell me the truth, my friends.  
At this last hour, the Church may yet  
    withhold  
Her sanction. Not the Church, but those  
    who think  
A little darkness helps her.

  Were this true,  
They would do well. If the poor light we  
    win



Confuse or blind us, to the Light of lights,  
Let all our wisdom perish. I affirm  
A greater Darkness, where the one true  
Church  
Shall after all her agonies of loss  
And many an age of doubt, perhaps, to  
come,  
See this processional host of splendours  
burn  
Like tapers round her altar.

So I speak  
Not for myself, but for the age unborn.  
I caught the fire from those who went  
before,  
The bearers of the torch who could not  
see  
The goal to which they strained. I caught  
their fire,  
And carried it, only a little way beyond ;  
But there are those that wait for it, I  
know,  
Those who will carry it on to victory.  
I dare not fail them. Looking back, I see

Those others,—fallen, with their arms out-  
stretched

Dead, pointing to the future.

Far, far back,  
Before the Egyptians built their pyramids  
With those dark funnels pointing to the  
north,

Through which the Pharaohs from their  
desert tombs

Gaze all night long upon the Polar Star,  
Some wandering Arab crept from death to  
life

Led by the Plough across those wastes of  
pearl. . . .

Long, long ago—have they not brought it  
yet ?

My book ?—I finished it one summer's  
night,

And felt my blood all beating into song.

I meant to print those verses in my  
book,

A prelude, hinting at that deeper night

Which darkens all our knowledge. Then

I thought

The measure moved too lightly.

Do you recall

Those verses, Elsa ? They would pass the  
time.

How happy I was the night I wrote that  
song ! ”

Then, one of those bowed shadows raised  
her head

And, like a mother crooning to her child,  
Murmured the words he wrote, so long ago.

In old Cathay, in far Cathay,

Before the western world began,

They saw the moving fount of day

Eclipsed, as by a shadowy fan ;

They stood upon their Chinese wall,

They saw his fire to ashes fade,

And felt the deeper slumber fall

On domes of pearl and towers of jade.

With slim brown hands, in Araby,  
    They traced, upon the desert sand,  
Their Rams and Scorpions of the sky,  
    And strove—and failed—to understand.  
Before their footprints were effaced  
    The shifting sand forgot their rune ;  
Their hieroglyphs were all erased,  
    Their desert naked to the moon.

In Bagdad of the purple nights,  
    Haroun Al Raschid built a tower,  
Where sages watched a thousand lights  
    And read their legends, for an hour.  
The tower is down, the Caliph dead,  
    Their astrolabes are wrecked with rust.  
Orion glitters overhead,  
    Aladdin's lamp is in the dust.

In Babylon, in Babylon,  
    They baked their tablets of the clay ;  
And, year by year, inscribed thereon  
    The dark eclipses of their day ;

They saw the moving finger write  
Its *Mene, Mene*, on their sun.  
A mightier shadow cloaks their light,  
And clay is clay in Babylon.

A shadow moved towards him from the  
door.

Copernicus, with a cry, upraised his head.  
“The book, I cannot see it, let me feel  
The lettering on the cover.

It is here !

Put out the lamp, now. Draw those cur-  
tains back,

And let me die with starlight on my face.  
An angel's hand in mine . . . yes ; I can  
say

My *nunc dimittis* now . . . light, and more  
light

In that pure realm whose darkness is our  
peace.”

## II.

## TYCHO BRAHE.

## I.

THEY thought him a magician, Tycho  
 Brahe,  
 Who lived on that strange island in the  
 Sound,  
 Nine miles from Elsinore.

His legend reached  
 The Mermaid Inn the year that Shake-  
 speare died.

Fynes Moryson had brought his travellers'  
 tales

Of Wheen, the heart-shaped isle where  
 Tycho made

His great discoveries, and, with Jeppe, his  
 dwarf,

And flaxen-haired Christine, the peasant  
girl,  
Dreamed his great dreams for five-and-  
twenty years.  
For there he lit that lanthorn of the law,  
Uraniborg ; that fortress of the truth,  
With Pegasus flying above its loftiest  
tower,  
While, in its roofs, like wide enchanted  
eyes  
Watching, the brightest windows in the  
world,  
Opened upon the stars.

Nine miles from Elsinore, with all those  
ghosts,  
There's magic enough in that ! But white-  
cliffed Wheen,  
Six miles in girth, with crowds of hunch-  
back waves  
Crawling all round it, and those moon-  
struck windows,  
Held its own magic, too ; for Tycho Brahe

By his mysterious alchemy of dreams  
Had so enriched its soil, that when the  
king  
Of England wished to buy it, Denmark  
asked  
A price too great for any king on earth.  
“Give us,” they said, “in scarlet car-  
dinal’s cloth  
Enough to cover it, and, at every corner,  
Of every piece, a right rose-noble too ;  
Then all that kings can buy of Wheen is  
yours.  
Only,” said they, “a merchant bought it  
once ;  
And, when he came to claim it, goblins  
flocked  
All round him, from its forty goblin farms,  
And mocked him, bidding him take away  
the stones  
That he had bought, for nothing else was  
his.”  
These things were fables. They were also  
true.



They thought him a magician, Tycho  
Brahe,

The astrologer, who wore the mask of gold.  
Perhaps he was. There's magic in the  
truth ;

And only those who find and follow its  
laws

Can work its miracles.

Tycho sought the truth  
From that strange year in boyhood when  
he heard

The great eclipse foretold ; and, on the  
day

Appointed, at the very minute even,  
Beheld the weirdly punctual shadow creep  
Across the sun, bewildering all the birds  
With thoughts of evening.

Picture him, on that day,  
The boy at Copenhagen, with his mane  
Of thick red hair, thrusting his freckled  
face

Out of his upper window, holding the  
piece

Of glass he blackened above his candle-  
flame

To watch that orange ember in the sky  
Wane into smouldering ash.

He whispered there,  
“So it is true. By searching in the  
heavens,  
Men can foretell the future.”

In the street  
Below him, throngs were babbling of the  
plague  
That might or might not follow.

He resolved  
To make himself the master of that deep  
art,  
And know what might be known.

He bought the books  
Of Stadius with his tables of the stars.  
Night after night, among the gabled roofs,  
Climbing and creeping through a world  
unknown  
Save to the roosting stork, he learned to  
find

The constellations, Cassiopeia's throne,  
The Plough still pointing to the Polar  
Star,  
The sword-belt of Orion. There he watched  
The movements of the planets, hours on  
hours,  
And wondered at the mystery of it all.

All this he did in secret, for his birth  
Was noble, and such wonderings were a  
sign  
Of low estate, when Tycho Brahe was  
young ;  
And all his kinsmen hoped that Tycho  
Brahe  
Would live, serene as they, among his  
dogs .  
And horses ; or, if honour must be won,  
Let the superfluous glory flow from fields  
Where blood might still be shed ; or from  
those courts  
Where statesmen lie. But Tycho sought  
the truth.

So, when they sent him in his tutor's  
charge

To Leipzig, for such studies as they held  
More worthy of his princely blood, he  
searched

The Almagest ; and while his tutor slept,  
Measured the delicate angles of the stars,  
Out of his window, with his compasses,  
His only instrument. Even with this rude  
aid

He found so many an ancient record  
wrong

That more and more he burned to find  
the truth.

One night at home, as Tycho searched the  
sky,

Out of his window, compasses in hand,  
Fixing one point upon a planet, one  
Upon some loftier star, a ripple of laughter  
Startled him, from the garden walk below.  
He lowered his compass, peered into the  
dark

And saw—Christine, the blue-eyed peasant  
girl,  
With bare brown feet, standing among the  
flowers.

She held what seemed an apple in her  
hand ;  
And, in a voice that Aprilled all his blood,  
The low soft voice of earth, drawing him  
down  
From those cold heights to that warm  
breast of Spring,  
A natural voice that had not learned to use  
The false tones of the world, simple and  
clear  
As a bird's voice, out of the fragrant dark-  
ness called,  
“ I saw it falling from your window-ledge !  
I thought it was an apple, till it rolled  
Over my foot.

It's heavy. Shall I try  
To throw it back to you ? ”

Tycho saw a stain

Of purple across one small arched glistening foot.

“Your foot is bruised,” he cried.

“O no,” she laughed,  
And plucked the stain off. “Only a petal,  
see.”

She showed it to him.

“But this—I wonder now  
If I can throw it.”

Twice she tried and failed ;  
Or Tycho failed to catch that slippery  
sphere.

He saw the supple body swaying below,  
The ripe red lips that parted as she  
laughed,  
And those deep eyes where all the stars  
were drowned.

At the third time he caught it ; and she  
vanished,  
Waving her hand, a little floating moth,  
Between the pine-trees, into the warm  
dark night.

He turned into his room, and quickly  
thrust

Under his pillow that forbidden fruit ;  
For the door opened, and the hot red face  
Of Otto Brahe, his father, glowered at him.  
“ What’s this ? What’s this ? ”

The furious-eyed old man  
Limped to the bedside, pulled the mystery  
out,

And stared upon the strangest apple of  
Eve

That ever troubled Eden,—heavy as bronze,  
And delicately enchased with silver stars,  
The small celestial globe that Tycho bought  
In Leipzig.

Then the storm burst on his head !  
This moon - struck ’pothecary’s - prentice  
work,

These cheap-jack calendar-maker’s gipsy  
tricks

Would damn the mother of any Knutsdorp  
squire,

And crown his father like a stag of ten.

Quarrel on quarrel followed from that  
    night,  
Till Tycho sickened of his ancient name ;  
And, wandering through the woods about  
    his home,  
Found on a hill-top, ringed with fragrant  
    pines,  
A little open glade of whispering ferns.  
Thither, at night, he stole to watch the  
    stars ;  
And there he told the oldest tale on  
    earth  
To one that watched beside him, one  
    whose eyes  
Shone with true love, more beautiful than  
    the stars,  
A daughter of earth, the peasant-girl,  
    Christine.

They met there, in the dusk, on his last  
    night  
At home, before he went to Witten-  
    berg.



They stood knee-deep among the whisper-  
ing ferns,  
And said good-bye.

“ I shall return,” he said,  
“ And shame them for their folly, who  
would set  
Their pride above the stars, Christine,  
and you.

At Wittenberg or Rostoch I shall find  
More chances and more knowledge. All  
those worlds

Are still to conquer. We know nothing  
yet ;

The books are crammed with fables. They  
foretell

Here an eclipse, and there a dawning moon,  
But most of them were out a month or  
more

On Jupiter and Saturn.

There's one way,  
And only one, to knowledge of the law  
Whereby the stars are steered, and so to  
read

The future, even perhaps the destinies  
Of men and nations, — only one sure  
    way,  
And that's to watch them, watch them,  
    and record  
The truth we know, and not the lies we  
    dream.  
Dear, while I watch them, though the hills  
    and sea  
Divide us, every night our eyes can  
    meet  
Among those constant glories. Every  
    night  
Your eyes and mine, upraised to that  
    bright realm,  
Can, in one moment, speak across the  
    world.  
I shall come back with knowledge and with  
    power,  
And you—will wait for me ? ”

She answered him

In silence, with the starlight of her eyes.

## II.

He watched the skies at Wittenberg. The  
    plague  
Drove him to Rostoch, and he watched  
    them there ;  
But, even there, the plague of little minds  
Beset him. At a wedding-feast he met  
His noble countryman, Manderup, who  
    asked,  
With mocking courtesy, whether Tycho  
    Brahe  
Was ready yet to practise his black art  
At country fairs. The guests, and Tycho,  
    laughed ;  
Whereat the swaggering Junker blandly  
    sneered,  
“ If fortune - telling fail, Christine will  
    dance,  
Thus—tambourine on hip,” he struck a  
    pose.  
“ Her pretty feet will pack that booth of  
    yours.”

They fought, at midnight, in a wood, with  
swords.

And not a spark of light but those that  
leapt

Blue from the clashing blades. Tycho  
had lost

His moon and stars awhile, almost his life ;  
For, in one furious bout, his enemy's  
blade

Dashed like a scribble of lightning into the  
face

Of Tycho Brahe, and left him spluttering  
blood,

Groping through that dark wood with  
outstretched hands,

To fall in a death-black swoon.

They carried him back  
To Rostoch ; and when Tycho saw at last  
That mirrored patch of mutilated flesh,  
Seared as by fire, between the frank blue  
eyes

And firm young mouth where, like a living  
flower

Upon some stricken tree, youth lingered  
still,  
He'd but one thought, Christine would  
shrink from him  
In fear, or worse, in pity. An end had  
come  
Worse than old age, to all the glory of  
youth.  
Urania would not let her lover stray  
Into a mortal's arms. He must remain  
Her own, for ever ; and for ever, alone.

Yet, as the days went by, to face the  
world,  
He made himself a delicate mask of gold  
And silver, shaped like those that minstrels  
wear  
At carnival in Venice, or when love,  
Disguising its disguise of mortal flesh,  
Wooes as a nameless prince from far away.  
And when this world's day, with its blaze  
and coil  
Was ended, and the first white star awoke

In that pure realm where dreams may  
find their own,  
His eyes and hers, meeting on Hesperus,  
Renewed their troth.

He seemed to see Christine,  
Ringed by the pine-trees on that distant  
hill,  
A small white figure, lost in space and  
time,  
Yet gazing at the sky, and conquering all,  
Height, depth, and heaven itself, by the  
sheer power  
Of love at one with everlasting laws,  
A love that shared the constancy of heaven,  
And spoke to him across, above, the world.

### III.

Not till he crossed the Danube did he find  
Among the fountains and the storied eaves  
Of Augsburg, one to share his task with  
him.

Paul Hainzel, of that city, greatly loved,

To talk with Tycho of the strange new  
dreams

Copernicus had kindled. Did this earth  
Move? Was the sun the centre of our  
scheme?

And Tycho told him, there is but one way  
To know the truth, and that's to sweep  
aside

All the dark cobwebs of old sophistry,  
And watch and learn that moving alphabet,  
Each smallest silver character inscribed  
Upon the skies themselves, noting them  
down,

Till on a day we find them taking shape  
In phrases, with a meaning; and, at last,  
The hard-won beauty of that celestial book  
With all its epic harmonies unfold  
Like some great poet's universal song.

He was a great magician, Tycho Brahe.

"Hainzel," he said, "we have no magic  
wand,

But what the truth can give us. If we find

Even with a compass, through a bedroom  
window,  
That half the glittering *Almagest* is wrong,  
Think you, what noble conquests might  
be ours,  
Had we but nobler instruments.”

He showed  
Quivering with eagerness, his first rude  
plan  
For that great quadrant,—not the wooden  
toy  
Of old *Scultetus*, but a kingly weapon,  
Huge as a Roman battering-ram, and fine  
In its divisions as any goldsmith’s work.  
“It could be built,” said Tycho, “but the  
cost  
Would buy a dozen culverin for your wars.”  
Then Hainzel, fired by Tycho’s burning  
brain,  
Answered, “We’ll make it. We’ve a war  
to wage  
On Chaos, and his kingdoms of the  
night.”



They chose the cunningest artists of the  
town,

Clock-makers, jewellers, carpenters, and  
smiths,

And, setting them all afire with Tycho's  
dream,

Within a month his dream was oak and  
brass.

Its beams were fourteen cubits, solid oak,  
Banded with iron. Its arch was polished  
brass

Whereon five thousand exquisite divisions  
Were marked to show the minutes of  
degrees.

So huge and heavy it was, a score of men  
Could hardly drag and fix it to its place  
In Hainzel's garden.

Many a shining night,  
Tycho and Hainzel, out of that maze of  
flowers,  
Charted the stars, discovering point by  
point,

How all the records erred, until the fame  
Of this new master, hovering above the  
schools

Like a strange hawk, threatened the creep-  
ing dreams

Of all the Aristotelians, and began  
To set their mouse-holes twittering “ Tycho  
Brahe ! ”

Then Tycho Brahe came home, to find Christine.

Up to that whispering glade of ferns he  
 sped,

At the first wink of Hesperus.

He stood  
In shadow, under the darkest pine, to  
hide

The little golden mask upon his face.

He wondered, will she shrink from me in  
fear

Or loathing? Will she even come at all?  
And, as he wondered, like a light she  
moved

Before him.

“ Is it you ? ”—

“ Christine ! Christine,”

He whispered, “ It is I, the mountebank,  
Playing a jest upon you. It’s only a mask !  
Do not be frightened. I am here behind it.”

Her red lips parted, and between them  
shone

The little teeth like white pomegranate  
seeds.

He saw her frightened eyes.

Then, with a cry,

Her arms went round him, and her eyelids  
closed.

Lying against his heart, she set her lips  
Against his lips, and claimed him for her  
own.

#### IV.

One frosty night, as Tycho bent his way  
Home to the dark old abbey, he upraised  
His eyes, and saw a portent in the sky.

There, in its most familiar patch of blue,  
Where Cassiopeia's five-fold glory burned,  
An unknown brilliance quivered, a huge  
star

Unseen before, a strange new visitant  
To heavens unchangeable, as the world  
believed,

Since the creation.

Could new stars be born ?

Night after night he watched that miracle  
Growing and changing colour as it grew ;  
White at the first, and large as Jupiter ;  
And, in the third month, yellow, and larger  
yet ;

Red in the fifth month, like Aldebaran,  
And larger even than Lyra. In the seventh,  
Bluish like Saturn ; whence it dulled and  
dwined

Little by little, till after eight months more  
Into the dark abysmal blue of night,  
Whence it arose, the wonder died away.  
But, while it blazed above him, Tycho  
brought

Those delicate records of two hundred  
    nights  
To Copenhagen. There, in his golden mask,  
At supper with Pratensis, who believed  
Only what old books told him, Tycho met  
Dancey, the French Ambassador, rainbow-  
    gay  
In satin hose and doublet, supple and  
    thin,  
Brown-eyed, and bearded with a soft black  
    tuft  
Neat as a blackbird's wing,—a spirit as  
    keen  
And swift as France on all the starry trails  
Of thought.

    He saw the deep and simple fire,  
The mystery of all genius, in those eyes  
Above the golden vizard.

                                Tycho raised  
His wine-cup, brimming—they thought—  
    with purple dreams ;  
And bade them drink to their triumphant  
    Queen

Of all the Muses, to their Lady of  
Light

Urania, and the great new star.

They laughed,  
Thinking the young astrologer's golden  
mask

Hid a sardonic jest.

“The skies are clear,”  
Said Tycho Brahe, “and we have eyes to  
see.

Put out your candles. Open those windows  
there !”

The colder darkness breathed upon their  
brows,

And Tycho pointed, into the deep blue  
night.

There, in their most immutable height of  
heaven,

In *ipso cælo*, in the ethereal realm,  
Beyond all planets, red as Mars it burned,  
The one impossible glory.

“But it's true !”

Pratensis gasped ; then, clutching the first  
straw,

“ Now I recall how Pliny the Elder said,  
Hipparchus also saw a strange new star,  
Not where the comets, not where the  
*Rosæ* bloom

And fade, but in that solid crystal sphere  
Where nothing changes.”

Tycho smiled, and showed  
The record of his watchings.

“ But the world  
Must know all this,” cried Dancey. “ You  
must print it.”

“ Print it ? ” said Tycho, turning that  
golden mask

On both his friends. “ Could I, a noble,  
print .

This trafficking with Urania in a book ?  
They’d hound me out of Denmark ! This  
disgrace

Of work, with hands or brain, no matter  
why,

No matter how, in one who ought to dwell

Fixed to the solid upper sphere, my friends,  
Would never be forgiven."

Dancey stared  
In mute amazement, but that mask of gold  
Outstared him, sphinx-like, and inscrutable.

Soon through all Europe, like the blinded  
moths,  
Roused by a lantern in old palaces  
Among the mouldering tapestries of  
thought,  
Weird fables woke and fluttered to and fro,  
And wild-eyed sages hunted them for  
truth.

The Italian, Frangipani, thought the star  
The lost Electra, that had left her throne  
Among the Pleiads, and plunged into the  
night

Like a veiled mourner, when Troy town  
was burned.

The German painter, Busch, of Erfurt,  
wrote,



“ It was a comet, made of mortal sins ;  
A poisonous mist, touched by the wrath  
    of God  
To fire ; from which there would descend  
    on earth  
All manner of evil—plagues and sudden  
    death,  
Frenchmen and famine.”

Preachers thumped and raved.  
Theodore Beza in Calvin's pulpit tore  
His grim black gown, and vowed it was  
    the Star  
That led the Magi. It had now returned  
To mark the world's end and the Judgment  
    Day.  
Then, in this hubbub, Dancey told the  
    king .  
Of Denmark, “ There is one who knows  
    the truth—  
Your subject Tycho Brahe, who, night by  
    night,  
Watched and recorded all that truth could  
    see.

It would bring honour to all Denmark,  
sire,  
If Tycho could forget his rank awhile,  
And print these great discoveries in a  
book,  
For all the world to read."

So Tycho Brahe  
Received a letter in the king's own hand,  
Urging him, "Truth is the one pure fountain-head  
Of all nobility. Pray forget your rank."  
His noble kinsmen echoed, "If you wish  
To please His Majesty and ourselves, forget  
Your rank."

"I will," said Tycho Brahe ;  
"Your reasoning has convinced me. I will  
print  
My book, '*De Nova Stella*.' And to prove  
All you have said concerning temporal  
rank  
And this eternal truth you love so well,  
I marry, to-day,"—they foamed, but all  
their mouths

Were stopped and stuffed and sealed with  
their own words,—

“ I marry to-day my own true love, Chris-  
tine.”

## v.

They thought him a magician, Tycho  
Brahe.

Perhaps he was. There's magic all around  
us

In rocks and trees, and in the minds of  
men,

Deep hidden springs of magic.

He that strikes  
The rock aright, may find them where he  
will.

•  
And Tycho tasted happiness in his hour.

There was a prince in Denmark in those  
days ;

And, when he heard how other kings  
desired

The secrets of this new astrology,

He said, "This man, in after years, will  
bring

Glory to Denmark, honour to her prince.  
He is a Dane. Give him this isle of Wheen,  
And let him make his great discoveries  
there.

Let him have gold to buy his instruments,  
And build his house and his observatory.

So Tycho set this island where he lived  
Whispering with wizardry ; and, in its  
heart,

He lighted that strange lanthorn of the law,  
And built himself that wonder of the world,  
Uraniborg, a fortress for the truth,  
A city of the heavens.

Around it ran

A mighty rampart twenty-two feet high,  
And twenty feet in thickness at the base.  
Its angles pointed north, south, east and  
west,

With gates and turrets ; and, within this  
wall,

Were fruitful orchards, apple, and cherry,  
and pear ;

And, sheltered in their midst from all  
but sun,

A garden, warm and busy with singing  
bees.

There, many an hour, his flaxen-haired  
Christine

Sang to her child, her first-born, Mag-  
dalen,

Or watched her playing, a flower among  
the flowers.

Dark in the centre of that zone of bliss  
Arose the magic towers of Tycho Brahe.  
Two of them had great windows in their  
roofs

Opening upon the sky where'er he willed,  
And under these observatories he made  
A library of many a golden book ;  
Poets and sages of old Greece and Rome,  
And many a mellow legend, many a dream  
Of dawning truth in Egypt, or the dusk  
Of Araby. Under all of these he made

A subterranean crypt for alchemy,  
With sixteen furnaces ; and, under this,  
He sank a well, so deep, that Jeppe declared  
He had tapped the central fountains of the  
world,  
And drew his magic from those cold clear  
springs.

This was the very well, said Jeppe, the  
dwarf,  
Where Truth was hidden ; but, by Tycho  
Brahe  
And his weird skill, the magic water  
flowed,  
Through pipes, uphill, to all the house  
above :  
The kitchen where his cooks could broil a  
trout  
For sages or prepare a feast for kings ;  
The garrets for the students in the roof ;  
The guest-rooms, and the red room to the  
north,

The study and the blue room to the south ;  
The small octagonal yellow room that held  
The sunlight like a jewel all day long,  
And Magdalen, with her happy dreams, at  
night ;

Then, facing to the west, one long green  
room,

The ceiling painted like the bower of Eve  
With flowers and leaves, the windows  
opening wide

Through which Christine and Tycho Brahe  
at dawn

Could see the white sails drifting on the  
Sound

Like petals from their orchard.

To the north,  
He built a printing house for noble books,  
Poems, and those deep legends of the  
sky,

Still to be born at his Uraniborg.

Beyond the rampart to the north arose  
A workshop for his instruments. To the  
south

A low thatched farm-house rambled round  
a yard  
Alive with clucking hens ; and, further yet  
To southward on another hill, he made  
A great house for his larger instruments,  
And called it Stiernberg, mountain of the  
stars.

And, on his towers and turrets, Tycho set  
Statues with golden verses in the praise  
Of famous men, the bearers of the torch,  
From Ptolemy to the new Copernicus.  
Then, in that storm-proof mountain of the  
stars,  
He set in all their splendour of new-made  
brass  
His armouries for the assault of heaven,—  
Circles in azimuth, armillary spheres,  
Revolving zodiacs with great brazen rings ;  
Quadrants of solid brass, ten cubits broad,  
Brass parallactic rules, made to revolve  
In azimuth ; clocks with wheels ; an astro-  
labe ;



And that large globe strengthened by oaken  
beams

He made at Augsburg.

All his gold he spent ;

But Denmark had a prince in those great  
days ;

And, in his brain, the dreams of Tycho  
Brahe

Kindled a thirst for glory. So he made  
Tycho the Lord of sundry lands and rents,  
And Keeper of the Chapel where the kings  
Of Oldenburg were buried ; for he said

“ To whom could all these kings entrust  
their bones

More fitly than to him who read the stars,  
And though a mortal, knew immortal  
laws ;

And paced, at night, the silent halls of  
heaven.

## VI.

He was a great magician, Tycho Brahe.  
There, on his island, for a score of years,

He watched the skies, recording star on  
star,

For future ages, and, by patient toil,  
Perfected his great tables of the sun,  
The moon, the planets.

There, too happy far  
For any history, sons and daughters rose,  
A little clan of love, around Christine ;  
And Tycho thought, when I am dead, my  
sons

Will rule and work in my Uraniborg.  
And yet a doubt would trouble him, for  
he knew

The children of Christine would still be  
held

Ignoble, by the world.

Disciples came,  
Young-eyed and swift, the bearers of the  
torch

From many a city to Uraniborg,  
And Tycho Brahe received them like a king,  
And bade them light their torches at his  
fire.

The King of Scotland came, with all his  
court,

And dwelt eight days in Tycho Brahe's  
domain,

Asking him many a riddle, deep and dark,  
Whose answer, none the less, a king should  
know.

What boots it on this earth to be a king,  
To rule a part of earth, and not to know  
The worth of his own realm, whether he  
rule

As God's vice-gerent, and his realm be  
still

The centre of the centre of all worlds ;  
Or whether, as Copernicus proclaimed,  
This earth itself be moving, a lost grain  
Of dust among the innumerable stars ?  
For this would dwarf all glory but the  
soul,

In king or peasant, that can hail the truth,  
Though truth should slay it."

So to Tycho Brahe,  
The king became a subject for eight days.

But, in the crowded hall, when he had  
gone,  
Jeppe raised his matted head, with a  
chuckle of glee,  
Quiet as the gurgle of joy in a dark rock-  
pool,  
When the first ripple and wash of the first  
spring-tide  
Flows bubbling under the dry sun-black-  
ened fringe  
Of seaweed, setting it all afloat again,  
In magical colours, like a merman's  
hair.  
“Jeppe has a thought,” the gay young  
students cried,  
Thronging him round, for all believed that  
Jeppe  
Was fey, and had strange visions of the  
truth.  
“What is the thought, Jeppe?”  
“I can think no thoughts,”  
Croaked Jeppe. “But I have made myself  
a song.”

“ Silence,” they cried, “ for Jeppe the nightingale !

Sing, Jeppe ! ”

And, wagging his great head to and fro  
Before the fire, with deep dark eyes, he  
crooned :

#### THE SONG OF JEPPE.

“ What ! ” said the king,

“ Is earth a bird or bee ?

Can this uncharted boundless realm of  
ours

Drone thro’ the sky, with leagues of  
struggling sea,

Forests, and hills, and towns, and palace-  
towers ? ”

“ Ay,” said the dwarf,

“ I have watched from Stiernborg’s  
crown

Her far dark rim uplift against the sky ;  
But, while earth soars, men say the stars  
go down ;

And, while earth sails, men say the stars  
go by.”

An elvish tale !

Ask Jeppe, the dwarf ! *He* knows.

That's why his eyes look fey ; for,  
chuckling deep,

Heels over head amongst the stars he  
goes,

As all men go ; but most are sound  
asleep.

King, saint, and sage,

Even those that count it true,

Act as this miracle touched them not  
at all.

They are borne, undizzied, thro' the rush-  
ing blue,

And build their empires on a sky-tossed  
ball.

Then said the king,

“ If earth so lightly move,       •

What of my realm ? O, what shall now  
stand sure ? ”

“ Nought,” said the dwarf, “ in all this  
world, but love.

All else is dream-stuff and shall not  
endure.

'Tis nearer now !

Our universe hath no centre,  
Our shadowy earth and fleeting heavens  
no stay,  
But that deep inward realm which each  
can enter,  
Even Jeppe, the dwarf, by his own  
secret way."

"Where ? " said the king,

"O, where ? I have not found it !"

"Here," said the dwarf, and music  
echoed "here."

"This infinite circle hath no line to bound  
it ;

Therefore that deep strange centre is  
everywhere.

Let the earth soar thro' heaven, that  
centre abideth ;

Or plunge to the pit, His covenant still  
holds true.

In the heart of a dying bird, the Master  
hideth ;

In the soul of a king," said the dwarf,  
"and in *my* soul, too."

## VII.

Princes and courtiers came, a few to seek  
A little knowledge, many more to gape  
In wonder at Tycho's gold and silver mask ;  
Or when they saw the beauty of his towers,  
Envy and hate him for them.

Thus arose  
The small grey cloud upon the distant sky,  
That broke in storm at last.

“ Beware,” croaked Jeppe,  
Lifting his shaggy head beside the fire,  
When guests like these had gone, “ Master,  
beware ! ”

And Tycho of the frank blue eyes would  
laugh.

Even when he found Witichius playing  
him false,

His anger, like a momentary breeze,  
Died on the dreaming deep ; for Tycho  
Brahe

Turned to a nobler riddle,—“ Have you  
thought,”



He asked his young disciples, “how the  
sea

Is moved to that strange rhythm we call  
the tides ?

He that can answer this shall have his  
name

Honoured among the bearers of the torch  
While Pegasus flies above Uraniborg.

I was delayed three hours or more to-  
day

By the neap-tide. The fishermen on the  
coast

Are never wrong. They time it by the  
moon.

*Post hoc*, perhaps, not *propter hoc* ; and  
yet

Through all the changes of the sky and  
sea

That old white clock of ours with the  
battered face

Does seem infallible.

There's a love-song too,  
The sailors on the coast of Sweden sing,

I have often pondered it. Your courtly  
poets  
Upbraid the inconstant moon. But these  
men know  
The moon and sea are lovers, and they  
move  
In a most constant measure. Hear the  
words  
And tell me, if you can, what silver  
chains  
Bind them together." Then, in a voice as  
low  
And rhythmical as the sea, he spoke that  
song :

THE SHEPHERDESS OF THE SEA.

Reproach not yet our sails' delay ;  
You cannot see the shoaling bay,  
The banks of sand, the fretful bars,  
That ebb left naked to the stars.

The sea's white shepherdess, the moon,  
Shall lead us into harbour soon.

Dear, when you see her glory shine  
Between your fragrant boughs of pine,  
Know there is but one hour to wait  
Before her hands unlock the gate,  
    And the full flood of singing foam  
    Follow her lovely footsteps home.

Then waves like flocks of silver sheep  
Come rustling inland from the deep,  
And into rambling valleys press  
Behind their heavenly shepherdess.

    You cannot see them ? Lift your eyes  
    And see their mistress in the skies.

She rises with her silver bow.  
I feel the tide begin to flow ;  
And every thought and hope and dream  
Follow her call, and homeward stream.  
Borne on the universal tide,  
The wanderer hastens to his bride.  
    The sea's white shepherdess, the moon,  
    Shall lead him into harbour soon.

## VIII.

He was a great magician, Tycho Brahe,  
But not so great that he could read the  
heart  
Or rule the hand of princes.

When his friend  
King Frederick died, the young Prince  
Christian reigned ;  
And, round him, fool and knave made  
common cause  
Against the magic that could pour their  
gold  
Into a gulf of stars. This Tycho Brahe  
Had grown too proud. He held them in  
contempt,  
So they believed ; for, when he spoke,  
their thoughts  
Crept at his feet like spaniels. Junkerdom  
Felt it was foolish, for he towered above it,  
And so it hated him. Did he not spend  
Gold that a fool could spend as quickly  
as he ?

Were there not great estates bestowed  
upon him  
In wisdom's name, that from the dawn of  
time  
Had been the natural right of Junkerdom ?  
And would he not bequeath them to his  
heirs,  
The children of Christine, an unfree woman?  
“ Why you, sire, even you,” they told the  
king,  
“ He has made a laughing-stock. That  
horoscope  
He read for you, the night when you were  
born,  
Printed, and bound it in green velvet,  
too,—  
Read it. The whole world laughs at it.  
He said  
That Venus was the star that ruled your  
fate,  
And Venus would destroy you. Tycho  
Brahe  
Inspired your royal father with the fear

That kept your youth so long in leading-  
strings,  
The fear that every pretty hedgerow flower  
Would be your Circe. So he thought to  
avenge  
Our mockery of this peasant-girl, Christine,  
To whom, indeed, he plays the faithful  
swine,  
Knowing full well his gold and silver nose  
Would never win another.”

Thus the sky

Darkened above Uraniborg, and those  
Who dwelt within it, till one evil day,  
One seeming happy day, when Tycho  
marked  
The seven-hundredth star upon his chart,  
Two pompous officers from Walchendorp,  
The chancellor, knocked at Tycho's eastern  
gate.  
“We are sent,” they said, “to see and to  
report  
What use you make of these estates of  
yours.

Your alchemy has turned more gold to  
lead

Than Denmark can approve. The uses  
now !

Show us the uses of this work of yours."

Then Tycho showed his tables of the stars,  
Seven hundred stars, each noted in its  
place

With exquisite precision, the result  
Of watching heaven for five-and-twenty  
years.

"And is this all ? " they said.

They thought to invent  
Some ground for damning him. The truth  
alone

Would serve them, as it seemed. For these  
were men

Who could not understand.

"Not all, I hope,"  
Said Tycho, "for I think, before I die,  
I shall have marked a thousand."

"To what end ?

When shall we reap the fruits of all this  
toil ?

Show us its uses.”

“ In the time to come,”

Said Tycho Brahe, “ perhaps a hundred  
years,

Perhaps a thousand, when our own poor  
names

Are quite forgotten, and our kingdoms dust,  
On one sure certain day, the torch-bearers  
Will, at some point of contact, see a light  
Moving upon this chaos. Though our eyes  
Be shut for ever in an iron sleep,

Their eyes shall see the kingdom of the  
law,

Our undiscovered cosmos. They shall see  
it,—

A new creation rising from the deep,  
Beautiful, whole.

We are like men that hear  
Disjointed notes of some supernal choir.  
Year after year, we patiently record  
All we can gather. In that far-off time,



A people that we have not known shall  
hear them,  
Moving like music to a single end.”

They could not understand : this life that  
sought  
Only to bear the torch and hand it on ;  
And so they made report that all the  
dreams  
Of Tycho Brahe were fruitless ; perilous,  
too,  
Since he avowed that any fruit they bore  
Would fall, in distant years, to alien hands.

Little by little, Walchendorp withdrew  
His rents from Tycho Brahe, accusing him  
Of gross neglects. The Chapel at Roskilde  
Was falling into ruin. Tycho Brahe  
Was Keeper of the Bones of Oldenburg,  
He must rebuild the Chapel. All the  
gifts  
That Frederick gave to help him in his  
task,

Were turned to stumbling-blocks ; till,  
    one dark day,

He called his young disciples round him  
    there,

And in that mellow library of dreams,  
Lit by the dying sunset, poured his heart  
And mind before them, bidding them fare-  
    well.

Through the wide-open windows as he  
    spoke

They heard the sorrowful whisper of the  
    sea

Ebbing and flowing around Uraniborg.

“ An end has come,” he said, “ to all we  
    planned.

Uraniborg has drained her treasury dry.

Your Alma Mater now must close her gates  
On you, her guests ; on me ; and, worst  
    of all,

On one most dear, who made this place  
    my home.

For you are young, your homes are all to  
    win,

And you would all have gone your separate  
ways

In a brief while ; and, though I think you  
love

Your college of the skies, it could not  
mean

All that it meant to those who called it  
'home.'

You that have worked with me, for one  
brief year,

Will never quite forget Uraniborg.

This room, the sunset gilding all those  
books,

The star-charts, and that old celestial  
globe,

The long bright evenings by the winter fire,

The talk that opened heaven, the songs  
you sung,

Yes, even, I think, the tricks you played  
with Jeppe,

Will somehow, when yourselves are grow-  
ing old,

Be hallowed into beauty, touched with  
tears,  
For you will wish they might be yours  
again.

These have been mine for five-and-twenty  
years,  
And more than these,—the work, the  
dreams I shared  
With you, and others here. My heart will  
break  
To leave them. But the appointed time  
has come  
As it must come to all men.

You and I

Have watched too many constant stars to  
dream  
That heaven or earth, the destinies of men  
Or nations, are the sport of chance. An  
end  
Comes to us all through blindness, age, or  
death.  
If mine must come in exile, it shall find me

Bearing the torch as far as I can bear it,  
Until I fall at the feet of the young runner,  
Who takes it from me, and carries it out  
of sight,

Into the great new age I shall not know,  
Into the great new realms I must not tread.  
Come, then, swift-footed, let me see you  
stand

Waiting before me, crowned with youth  
and joy,

At the next turning. Take it from my  
hand,

For I am almost ready now to fall.

Something I have achieved, yes, though  
I say it,

I have not loitered on that fiery way.

And if I front the judgment of the wise

In centuries to come, with more of dread

Than my destroyers, it is because this work

Will be of use, remembered and appraised,

When all their hate is dead.

I say the work,

Not the blind rumour, the glory or fame  
of it.

These observations of seven hundred stars  
Are little enough in sight of those great  
hosts

Which nightly wheel around us, though I  
hope,

Yes, I still hope, in some more generous  
land

To make my thousand up before I die.

Little enough, I know,—a midget's work !

The men that follow me, with more delicate art

May add their tens of thousands ; yet my  
sum

Will save them just that five-and-twenty  
years

Of patience, bring them sooner 'to their  
goal,

That kingdom of the law I shall not see.

We are on the verge of great discoveries.

I feel them as a dreamer feels the dawn

Before his eyes are opened. Many of you

Will see them. In that day you will recall  
This, our last meeting at Uraniborg,  
And how I told you that this work of  
ours

Would lead to victories for the coming age.  
The victors may forget us. What of that ?  
Theirs be the palms, the shouting, and the  
praise.

Ours be the fathers' glory in the sons.  
Ours the delight of giving, the deep joy  
Of labouring, on the cliff's face, all night  
long,

Cutting them foot-holes in the solid rock,  
Whereby they climb so gaily to the heights,  
And gaze upon their new-discovered worlds.  
You will not find me there. When you  
descend,

Look for me in the darkness at the foot  
Of those high cliffs, under the drifted  
leaves.

That's where we hide at last, we pioneers,  
For we are very proud, and must be sought  
Before the world can find us, in our graves.

There have been compensations. I have  
seen

In darkness, more perhaps than eyes can see  
When sunlight blinds them on the moun-  
tain-tops ;

Guessed at a glory past our mortal range,  
And only mine because the night was mine.

Of those three systems of the universe,  
The Ptolemaic, held by all the schools,  
May yet be proven false. We yet may find  
This earth of ours is not the sovereign lord  
Of all those wheeling spheres. Ourselves  
have marked

Movements among the planets that forbid  
Acceptance of it wholly. Some of these  
Are moving round the sun, if we can trust  
Our years of watching. There are stranger  
dreams.

This radical, Copernicus, the priest,  
Of whom I often talked with you, declares  
All of these movements can be reconciled,  
If—a hypothesis only—we should take



The sun itself for centre, and assume  
That this huge earth, so 'stablished, so  
secure

In its foundations, is a planet also,  
And moves around the sun.

I cannot think it.  
This leap of thought is yet too great  
for me.

I have no doubt that Ptolemy was wrong.  
Some of his planets move around the sun.  
Copernicus is nearer to the truth  
In some things. But the planets we have  
watched

Still wander from the course that he  
assigned.

Therefore, my system, which includes the  
best

Of both, I hold may yet be proven true.  
This earth of ours, as Jeppe declared one  
day,

So simply that we laughed, is 'much too big  
To move,' so let it be the centre still,  
And let the planets move around their sun ;

But let the sun with all its planets move  
Around our central earth.

This at the least

Accords with all we know, and saves man-  
kind  
From that enormous plunge into the  
night ;  
Saves them from voyaging for ten thousand  
years  
Through boundless darkness without sight  
of land ;  
Saves them from all that agony of loss,  
As one by one the beacon-fires of faith  
Are drowned in blackness.

I beseech you, then,

Let me be proven wrong, before you take  
That darkness lightly. If at last you find  
The proven facts against me, take the  
plunge.  
Launch out into that darkness. Let the  
lamps  
Of heaven, the glowing hearth-fires that  
we knew

Die out behind you, while the freshening  
wind

Blows on your brows, and overhead you see  
The stars of truth that lead you from your  
home.

I love this island,—every little glen,  
Hazel-wood, brook, and fish-pond ; every  
bough

And blossom in that garden ; and I hoped  
To die here. But it is not chance, I know,  
That sends me wandering through the  
world again.

My use perhaps is ended ; and the power  
That made me, breaks me.”

As he spoke, they saw  
The tears upon his face. He bowed his  
head

And left them silent in the darkened room.  
They saw his face no more.

The self-same hour,  
Tycho, Christine, and all their children, left  
Their island-home for ever. In their ship

They took a few of the smaller instruments,

And that most precious record of the stars,  
His legacy to the future. Into the night  
They vanished, leaving on the ghostly  
cliffs

Only one dark, distorted, dog-like shape  
To watch them, sobbing, under its matted  
hair,

“ Master, have you forgotten Jeppe, your  
dwarf ? ”

## IX.

He was a great magician, Tycho Brahe,  
And yet his magic, under changing skies,  
Could never change his heart, or touch the  
hills

Of those far countries with the tints of  
home.

And, after many a month of wandering,  
He came to Prague ; and, though with  
open hands

Rodolphe received him, like an exiled king,

A new Æneas, exiled for the truth  
(For so they called him), none could heal  
the wounds

That bled within, or lull his grief to sleep  
With that familiar whisper of the waves,  
Ebbing and flowing around Uraniborg.

Doggedly still he laboured ; point by point,  
Crept on, with aching heart and burning  
brain,

Until his table of the stars had reached  
The thousand that he hoped, to crown his  
toil.

But Christine heard him murmuring in the  
night,

“ The work, the work ! Not to have lived  
in vain !

Into whose hands can I entrust it all ?  
I thought to find him standing by the way,  
Waiting to seize the splendour from my  
hand,

The swift, the young-eyed runner with the  
torch.

Let me not live in vain, let me not fall  
Before I yield it to the appointed soul.”  
And yet the Power that made and broke  
him heard :

For, on a certain day, to Tycho came  
Another exile, guided through the dark  
Of Europe by the starlight in his eyes,  
Or that invisible hand which guides the  
world.

He asked him, as the runner with the  
torch

Alone could ask, asked as a natural right  
For Tycho's hard-won life-work, those  
results,

His tables of the stars. He gave his name  
Almost as one who told him, *It is I*;  
And yet unconscious that he told ; a  
name

Not famous yet, though truth had marked  
him out

Already, by his exile, as her own,—  
The name of Johann Kepler.

“ It was strange,”

Wrote Kepler, not long after, "for I asked  
Unheard-of things, and yet he gave them  
to me

As if I were his son. When first I saw him,  
We seemed to have known each other  
years ago

In some forgotten world. I could not  
guess

That Tycho Brahe was dying. He was  
quick

Of temper, and we quarrelled now and  
then,

Only to find ourselves more closely bound  
Than ever. I believe that Tycho died  
Simply of heartache for his native land.

For though he always met me with a  
smile

Or jest upon his lips, he could not sleep  
Or work, and often unawares I caught  
Odd little whispered phrases on his lips  
As if he talked to himself, in a kind of  
dream.

Yet I believe the clouds dispersed a little

Around his deathbed, and with that strange  
joy

Which comes in death, he saw the un-  
changing stars.

Christine was there. She held him in her  
arms.

I think, too, that he knew his work was  
safe.

An hour before he died, he smiled at me,  
And whispered,—what he meant I hardly  
know—

Perhaps a broken echo from the past,  
A fragment of some old familiar thought,  
And yet I seemed to know. It haunts me  
still :

*‘ Come then, swift-footed, let me see you  
stand,*

*Waiting before me, crowned with youth and  
joy ;*

*This is the turning. Take it from my hand.  
For I am ready, ready now, to fall.’ ”*



## III.

## KEPLER.

JOHN KEPLER, from the chimney corner,  
watched

His wife Susannah, with her sleeves rolled  
back

Making a salad in a big blue bowl.

The thick tufts of his black rebellious hair  
Brushed into sleek submission; his trim  
beard

Snug as the soft round body of a thrush  
Between the white wings of his fan-shaped  
ruff

(His best, with the fine lace border) spoke  
of guests

Expected; and his quick grey humorous  
eyes,

His firm red whimsical pleasure-loving  
mouth,  
And all those elvish twinklings of his face,  
Were lit with eagerness. Only between  
his brows,  
Perplexed beneath that subtle load of  
dreams,  
Two delicate shadows brooded.

“What does it mean ?

Sir Henry Wotton’s letter breathed a hint  
That Italy is prohibiting my book,”  
He muttered. “Then, if Austria damns  
it too,

Susannah mine, we may be forced to choose  
Between the truth and exile. When he  
comes,

He’ll tell me more. Ambassadors, I sup-  
pose,

Can only write in cipher, while our world  
Is steered to heaven by murderers and  
thieves ;

But, if he’d wrapped his friendly warnings  
up

In a verse or two, I might have done more  
work

These last three days, eh, Sue ? ”

“ Look, John,” said she,  
“ What beautiful hearts of lettuce ? Tell  
me now

How shall I mix it ? Will your English  
guest

Turn up his nose at dandelion leaves  
As crisp and young as these ? They’ve  
just the tang

Of bitterness in their milk that gives a  
relish

And makes all sweet ; and that’s philo-  
sophy, John.

Now—these spring onions ! Would his  
Excellency

Like sugared rose-leaves better ? ”

“ He’s a poet,  
Not an ambassador only, so I think  
He’ll like a cottage salad.”

“ A poet, John !  
I hate their arrogant little insect ways !

I'll put a toadstool in."

" Poets, dear heart,  
Can be divided into two clear kinds,—  
One that, by virtue of a half-grown brain,  
Lives in a silly world of his own making,  
A bubble, blown by himself, in which he  
flits

And dizzily bombinates, chanting ' I, I, I,'  
For there is nothing in the heavens above  
Or the earth, or hell beneath, but goes to  
swell

His personal pronoun. Bring him some  
dreadful news

His dearest friend is burned to death,—  
You'll see

The monstrous insect strike an attitude  
And shape himself into one capital I,  
A rubric, with red eyes. You'll see him  
use

The coffin for his pedestal, hear him  
mouth

His ' I, I, I,' instructing haggard grief  
Concerning his odd ego. Does he chirp

Of love, its ' I, I, I ' Narcissus, love,  
Myself, Narcissus, imaged in those eyes ;  
For all the love-notes that he sounds are  
    made

After the fashion of passionate grass-  
    hoppers,

By grating one hind-leg across another.

Nor does he learn to sound that mellower  
    ' You,'

Until his bubble bursts and leaves him  
    drowned,

An insect in a soap-sud.

But there's another kind, whose mind still  
    moves

In vital concord with the soul of things ;  
So that it thinks in music, and its thoughts  
Pulse into natural song. A separate voice,  
And yet caught up by the surrounding  
    choirs,

There, in the harmonies of the Universe,  
Losing himself, he saves his soul alive."

" John, I'm afraid ! "—

    " Afraid of what, Susannah ? "—

“Afraid to put those Ducklings on to roast.

Your friend may miss his road ; and, if he’s late,

My little part of the music will be spoiled.”—

“He won’t, Susannah. Bad poets are always late.

Good poets, at times, delay a note or two ; But all the great are punctual as the sun.

What’s that ? He’s early ! That’s his knock, I think ! ”—

“The Lord have mercy, John, there’s nothing ready !

Take him into your study and talk to him, Talk hard. He’s come an hour before his time ;

And I’ve to change my dress. I’ll into the kitchen ! ”

Then, in a moment, all the cottage rang  
With greetings ; hand grasped hand ; his  
Excellency

Forgot the careful prologue he'd prepared,  
And made an end of mystery. He had  
brought

A message from his wisdom-loving king  
Who, hearing of new menaces to the  
light

In Europe, urged the illustrious Kepler  
now

To make his home in England. There, his  
thought

And speech would both be free.

“ My friend,” said Wotton,  
“ I have moved in those old strongholds  
of the night,

And heard strange mutterings. It is not  
many years

Since Bruno burned. There's trouble brew-  
ing too,

For one you know, I think,—the Florentine  
Who made that curious optic tube.”—

“ You mean  
The man at Padua, Galileo ? ”—

“ Yes.”

“They will not dare or need. Proof or  
disproof  
Rests with their eyes.”—

“Kepler, have you not heard  
Of those who, fifteen hundred years ago,  
Had eyes and would not see? Eyes  
quickly close  
When souls prefer the dark.”—

“So be it. Other and younger eyes will  
see.

Perhaps that’s why God gave the young a  
spice

Of devilry. They’ll go look, while elders  
gasp ;

And, when the Devil and Truth go hand in  
hand,

God help their enemies. You will send my  
thanks,

My grateful thanks, Sir Henry, to your  
king.

To-day I cannot answer you. I must  
think.

It would be very difficult. My wife



Would find it hard to leave her native  
land.

Say nothing yet before her."

Then, to hide  
Their secret from Susannah, Kepler poured  
His mind out, and the world's dead  
branches bloomed.

For, when he talked, another spring be-  
gan

To which our May was winter ; and, in  
the boughs

Of his delicious thoughts, like feathered  
choirs,

Bits of old rhyme, scraps from the Sabine  
farm,

Celestial phrases from the Shepherd King,  
And fluttering morsels from Catullus sang.

Much 'was fantastic. All was touched with  
light

That only genius knows to steal from  
heaven.

He spoke of poetry, as the "flowering  
time

Of knowledge," called it "thought in passionate tune  
With those great rhythms that steer the moon and sun ;  
Thought in such concord with the soul of things  
That it can only move, like tides and stars,  
And man's own beating heart, and the wings of birds,  
In law, whose service only sets them free."  
Therefore it often leaps to the truth we seek,  
Clasping it, as a lover clasps his bride  
In darkness, ere the sage can light his lamp.  
And so, in music, men might find the road  
To truth, at many a point, where sages grope.  
One day, a greater Plato would arise  
To write a new philosophy, he said,  
Showing how music is the golden clue  
To all the windings of this world's dark maze.

Himself had used it, partly proved it, too,  
In his own book,—*the Harmonies of the*  
*World.*

“All that the years discover points one way  
To this great ordered harmony,” he said,  
“Revealed on earth by music. Planets  
move  
In subtle accord like notes of one great  
song  
Audible only to the Artificer,  
The Eternal Artist. There’s no grief, no  
pain,  
But music—follow it simply as a clue,  
A microcosmic pattern of the whole—  
Can show you, somewhere in its golden  
scheme,  
The use of all such discords ; and, at last,  
Their exquisite solution. Then darkness  
breaks  
Into diviner light, love’s agony climbs  
Through death to life, and evil builds up  
heaven.

Have you not heard, in some great sym-  
phony,  
Those golden mathematics making clear  
The victory of the soul ? Have you not  
heard  
The very heavens opening ?  
Do those fools  
Who thought me an infidel then, still smile  
at me  
For trying to read the stars in terms of  
song,  
Discern their orbits, measure their dis-  
tances,  
By musical proportions ? Let them smile,  
My folly at least revealed those three  
great laws ;  
Gave me the golden vases of the Egyptians,  
To set in the great new temple of my God  
Beyond the bounds of Egypt.

They will forget  
My methods, doubtless, as the years go by,  
And the world's wisdom shuts its music out.  
The dust will gather on all my harmonies ;

Or scholars turn my pages listlessly,  
Glance at the musical phrases, and pass on,  
Not troubling even to read one Latin page.  
Yet they'll accept those great results as  
mine.

I call them mine. How can I help exulting,  
Who climbed my ladder of music to the  
skies

And found, by accident, let them call it so,  
Or by the inspiration of that Power  
Which built His world of music, those three  
laws :—

First, how the speed of planets round the  
sun

Bears a proportion, beautifully precise  
As music, to their silver distances ;

Next, that although they seem to swerve  
' aside

From those plain circles of old Copernicus,  
Their paths were not less rhythmical and  
exact,

But followed always that most exquisite  
curve

In its most perfect form, the pure ellipse ;  
Third, that although their speed from  
point to point  
Appeared to change, their radii always  
moved  
Through equal fields of space in equal  
times.

Was this my infidelity, was this  
Less full of beauty, less divine in truth,  
Than their dull chaos? You, the poet,  
will know

How, as those dark perplexities grew clear,  
And old anomalous discords changed to  
song,

My whole soul bowed and cried, *Almighty  
God,*

*These are Thy thoughts, I am thinking after  
Thee !*

I hope that Tycho knows. I owed so  
much

To Tycho Brahe ; for it was he who built  
The towers from which I hailed these  
three great laws.

How strange and far away it all seems now.  
The thistles grow upon that little isle  
Where Tycho's great Uraniborg once was.  
Yet, for a few sad years, before it fell  
Into decay and ruin, there was one  
Who crept about its crumbling corridors,  
And lit the fire of memory on its hearth.—  
Wotton looked quickly up, 'I think I  
have heard  
Something of that. You mean poor  
Jeppe, his dwarf.  
Fynes Moryson, at the Mermaid Inn one  
night  
Showed a most curious manuscript, a  
scrawl  
On yellow parchment, crusted here and  
there  
With sea-salt, or the salt of those thick  
tears  
Creatures like Jeppe, the crooked dwarf,  
could weep.  
It had been found, clasped in a crooked  
hand,  
Under the cliffs of Whcen, a crooked hand

That many a time had beckoned to passing  
ships,  
Hoping to find some voyager who would  
take  
A letter to its master.

The sailors laughed

And jeered at him, till Jeppe threw stones  
at them.  
And now Jeppe, too, was dead, and one  
who knew  
Fynes Moryson, had found him, and  
brought home  
That curious crooked scrawl. Fynes Eng-  
lished it  
Out of its barbarous Danish. Thus it ran :  
' Master, have you forgotten Jeppe, your  
dwarf,  
Who used to lie beside the big log-fire  
And feed from your own hand ? The hall  
is dark,  
There are no voices now,—only the wind  
And the sea-gulls crying round Uraniborg.  
I too am crying, Master, even I,  
Because there is no fire upon the hearth,



No light in any window. It is night,  
And all the faces that I knew are gone.

Master, I watched you leaving us. I saw  
The white sails dwindling into sea-gull's  
wings,

Then melting into foam, and all was dark.  
I lay among the wild flowers on the cliff  
And dug my nails into the stiff white  
chalk

And called you, Tycho Brahe. You did  
not hear ;

But gulls and jackdaws, wheeling round  
my head,

Mocked me with *Tycho Brahe*, and *Tycho*  
*Brahe !*'

You were a great magician, Tycho Brahe ;  
And, now that they have driven you away,  
I, that am only Jeppe,—the crooked dwarf,  
You used to laugh at for his matted hair,  
And head too big and heavy—take your pen  
Here in your study. I will write it down  
And send it by a sailor to the King

Of Scotland, and who knows, the mouse  
that gnawed  
The lion free, may save you, Tycho Brahe.”

“ He is free now,” said Kepler. “ Had he  
lived,  
He would have sent for Jeppe to join him  
there  
At Prague. But death forestalled him,  
and your king.  
The years in which he watched that planet  
Mars,  
His patient notes and records, all were  
mine ;  
And, mark you, had he clipped or trimmed  
one fact  
By even a hair’s-breadth, so that his  
results  
Made a pure circle of that planet’s path,  
It might have baffled us for an age and  
drowned  
All our new light in darkness. But he held  
To what he saw. He might so easily,  
So comfortably have said, ‘ My instruments

Are crude and fallible. In so fine a point  
Eyes may have erred, too. Why not  
acquiesce ?

Why mar the tune, why dislocate a world,  
For one slight clash of seeming fact with  
faith ? ’

But no, though stars might swerve, he held  
his course,  
Recording only what his eyes could see  
Until death closed them.

Then, to his results,  
I added mine and saw, in one wild gleam,  
Strange as the light of day to one born  
blind,

A subtler concord ruling them, and heard  
Profounder tones of harmony resolve  
Those broken melodies into song again.”—  
“Faintly and far away, I, too, have  
seen

In music, and in verse, that golden clue  
Whereof you speak,” said Wotton. “In  
all true song  
There is a hidden logic. Even the rhyme

That, in bad poets, wrings the neck of  
thought,  
Is like a subtle calculus to the true,  
An instrument of discovery. It reveals  
New harmonies, new analogies. It links  
Far things and near, not in unnatural  
chains,  
But in those true accords which still escape  
The plodding reason, yet unify the world.  
I caught some glimpses of this mystic  
power  
In verses of your own, that elegy  
On Tycho, and that great quatrain of  
yours—  
I cannot quite recall the Latin words,  
But made it roughly mine in words like  
these :

.

*‘ I know that I am dust, and daily die ;  
Yet, as I trace those rhythmic spheres at  
night,  
I stand before the Thunderer’s throne on high  
And feast on nectar in the halls of light.’*

My version lacks the glory of your lines  
But . . .”

“ Mine too was a version,”  
Kepler laughed,  
“ Turned into Latin from old Ptolemy’s  
Greek ;  
For, even in verse, half of the joy, I  
think,  
Is just to pass the torch from hand to  
hand  
An undimmed splendour. But, last night,  
I tried  
Some music all my own. I had a dream  
That I was wandering in some distant  
world.  
I have often dreamed it. Once it was the  
moon.  
I wrote that down in prose. When I am  
dead,  
It may be printed. This was a fairer  
dream ;  
For I was walking in a far-off spring  
Upon the planet, Venus. Only verse

Could spread true wings for that delicious  
world ;

And so I wrote it—for no eyes but mine,  
Or 'twould be seized on, doubtless, as fresh  
proof

Of poor old Kepler's madness."—

“ Let me hear,  
Madman to madman ; for I, too, write  
verse.”

Then Kepler, in a rhythmic murmur,  
breathed

His rich enchanted memories of that  
dream :

Beauty burned before me

Swinging a lanthorn through that  
fragrant night.

I followed a distant singing,

And a dreaming light.

How she led me, I cannot tell

To that strange world afar,

Nor how I walked, in that wild glen

Upon the sunset star.

Wingèd creatures floated  
Under those rose-red boughs of violet  
bloom,  
With delicate forms unknown on Earth  
'Twixt irised plume and plume ;  
Human-hearted, angel-eyed,  
And crowned with unknown flowers ;  
For nothing in that enchanted world  
Followed the way of ours.

Only I saw that Beauty,  
On Hesper, as on earth, still held  
command ;  
And though, as one in slumber,  
I roamed that radiant land,  
With all these earth-born senses sealed  
To what the Hesperians knew,  
The faithful lanthorn of her law  
Was mine on Hesper too.

Then, half at home with wonder,  
I saw strange flocks of flowers like  
birds take flight ;

Great trees that burned like opals  
To lure their loves at night ;  
Dark beings that could move in realms  
No dream of ours has known,  
Till these became as common things  
As men account their own.

Yet, when that lanthorn led me  
Back to the world where once I  
thought me wise ;  
I saw, on this my planet,  
What souls, with awful eyes.  
Hardly I dared to walk her fields  
As in that strange re-birth  
I looked on those wild miracles  
The birds and flowers of earth.

Silence a moment held them, loth to  
break

The spell of that strange dream.

“ One proof the more,”  
Said Wotton at last, “ that songs can  
mount and fly



To truth ; for this fantastic vision of yours  
Of life in other spheres, awakes in me,  
Either that slumbering knowledge of Soc-  
rates,

Or some strange premonition that the  
years

Will prove it true. This music leads us far  
From all our creeds, except that faith in  
law.

Your quest for knowledge—how it rests  
on that !

How sure the soul is that if truth destroy  
The temple, in three days the truth will  
build

A nobler temple ; and that order reigns  
In all things. Even your atheist builds  
his doubt

On that strange faith ; destroys his heaven  
and God

In absolute faith that his own thought is  
true

To law, God's lanthorn to our stumbling  
feet ;

And so, despite himself, he worships God,  
For where true souls are, there are God  
and heaven.”—

“ It is an ancient wisdom. Long ago,”  
Said Kepler, “ under the glittering Eastern  
sky,  
The shepherd king looked up at those  
great stars,  
Those ordered hosts, and cried *Cæli narrant  
Gloriam Dei !*

Though there be some to-day  
Who’d ape Lucretius, and believe them-  
selves  
Epicureans, little they know of him  
Who, even in utter darkness, bowed his  
head,  
To something nobler than the gods of  
Rome  
Reigning beyond the darkness.

They accept  
The law, the music of these ordered  
worlds ;

And straight deny the law's first postulate,  
That out of nothingness nothing can be  
born,

Nor greater things from less. Can music rise  
By chance from chaos, as they said that  
star

In Serpentarius rose ? I told them, then,  
That when I was a boy, with time to spare,  
I played at anagrams. Out of my Latin  
name

*Johannes Keplerus* came that sinister phrase  
*Serpens in akuleo*. Struck by this,

I tried again, but trusted it to chance.  
I took some playing-cards, and wrote on  
each

One letter of my name. Then I began  
To shuffle them ; and, at every shuffle, I  
read

The letters, in their order, as they came,  
To see what meaning chance might give  
to them.

Wotton, the gods and goddesses must have  
laughed

To see the weeks I lost in studying chance ;  
For had I scattered those cards into the  
black

Epicurean eternity, I'll swear  
They'd still be playing at leap-frog in the  
dark,

And show no glimmer of sense. And yet  
—to hear

Those wittols talk, you'd think you'd but  
to mix

A bushel of good Greek letters in a sack  
And shake them roundly for an age or so,  
To pour the Odyssey out.

At last, I told  
Those disputants what my wife had said  
One night

When I was tired and all my mind a-dust.  
With pondering on their atoms, I was  
called

To supper, and she placed before me there  
A most delicious salad. ' It would appear,'  
I thought aloud, ' that if these pewter  
dishes,

Green hearts of lettuce, tarragon, slips of  
thyme,  
Slices of hard-boiled egg, and grains of  
salt,  
With drops of water, vinegar and oil,  
Had in a bottomless gulf been flying about  
From all eternity, one sure certain day  
The sweet invisible hand of Happy Chance  
Would serve them as a salad.'

'Likely enough,'

My wife replied, 'but not so good as  
mine,  
Nor so well dressed.'

They laughed. Susannah's voice  
Broke in, 'I've made a better one. The  
receipt  
Came from the *Golden Lion*. I have dished  
Ducklings and peas and all. Come, John,  
say grace.' "

## IV.

## GALILEO.

## I.

*(Celeste, in the Convent at Arcetri, writes to her  
old lover at Rome.)*

MY friend, my dearest friend, my own  
dear love,

I, who am dead to love, and see around me  
The funeral tapers lighted, send this cry  
Out of my heart to yours, before the end.  
You told me once you would endure the  
rack

To save my heart one pang. O, save it  
now !

Last night there came a dreadful word  
from Rome

For my dear lord and father, summoning  
him

Before the inquisitors there, to take his  
trial

At threescore years and ten. There is a  
threat

Of torture, if his lips will not deny  
The truth his eyes have seen.

You know my father,  
You know me, too. You never will believe  
That he and I are enemies of the faith.  
Could I, who put away all earthly love,  
Deny the Cross to which I nailed this flesh?  
Could he, who, on the night when all those  
heavens

Opened above us, with their circling worlds,  
Knelt with me, crushed beneath that  
weight of glory, \

Forget the Maker of that glory now?

You'll not believe it. Neither would the  
Church,

Had not his enemies poisoned all the  
springs

And fountain-heads of truth. It is not  
Rome

That summons him, but Magini, Sizzy,  
Scheiner,

Lorini, all the blind, pedantic crew

That envy him his fame, and hate his  
works

For dwarfing theirs.

Must such things always be  
When truth is born ?

Only five nights ago we walked together,  
My father and I, here in the Convent  
garden ;

And, as the dusk turned everything to  
dreams,

We dreamed together of his work well  
done

And happiness to be. We did not dream  
That even then, muttering above his book,  
His enemies, those enemies whom the  
truth

Stings into hate, were plotting to destroy  
him.



Yet something shadowed him. I recall  
his words—

“The grapes are ripening. See, Celeste,  
how black

And heavy. We shall have good wine  
this year.”—

“Yes, all grows ripe,” I said, “your life-  
work, too,

Dear father. Are you happy now to know  
Your book is printed, and the new world  
born ? ”

He shook his head, a little sadly, I thought.

“Autumn’s too full of endings. Fruits  
grow ripe

And fall, and then comes winter.”

“Not for you !  
Never,” I said, “for those who write  
their names

In heaven. Think, father, through all  
ages now

No one can ever watch that starry sky  
Without remembering you. Your fame . . .”

And there

He stopped me, laid his hand upon my arm,  
And standing in the darkness with dead  
leaves

Drifting around him, and his bare grey  
head

Bowed in complete humility, his voice  
Shaken and low, he said like one in prayer,  
“Celeste, beware of that. Say truth, not  
fame.

If there be any happiness on earth,  
It springs from truth alone, the truth we  
live

In act and thought. I have looked up  
there and seen

Too many worlds to talk of fame on earth.  
Fame, on this grain of dust among the  
stars,

The trumpet of a gnat that thinks to halt  
The great sun-clusters moving on their way  
In silence ! Yes, that's fame. But truth,  
Celeste,

Truth and its laws are constant, even up  
there ;

That's where one man may face and fight  
the world.

His weakness turns to strength. He is  
made one

With universal forces, and he holds  
The password to eternity.

Gate after gate swings back through all  
the heavens.

No sentry halts him, and no flaming sword.  
Say truth, Celeste, not fame."

"No, for I'll say  
A better word," I told him. "I'll say  
love."

He took my face between his hands and  
said—

His face all dark between me and the  
stars—

"What's love, Celeste, but this dear face  
of truth

Upturned to heaven."

He left me, and I heard,  
Some twelve hours later, that this man  
whose soul

Was dedicate to truth, was threatened  
now

With torture, if his lips did not deny  
The truth he loved.

I tell you all these things  
Because to help him, you must understand  
him ;

And even you may doubt him, if you hear  
Only those plausible outside witnesses  
Who never heard his heart-beats as have I.  
So let me tell you all—his quest for truth,  
And how this hate began.

Even from the first,  
He made his enemies of those almost-  
minds

Who chanced upon some new thing in the  
dark

And could not see its meaning, for he saw,  
Always, the law illumining it within.

So when he heard of that strange optic-  
glass

Which brought the distance near, he  
thought it out

By reason, where that other hit upon it  
Only by chance. He made his telescope ;  
And O, how vividly that day comes back,  
When in their gorgeous robes the Senate  
stood

Beside him on that high Venetian tower,  
Scanning the bare blue sea that showed  
no speck

Of sail. Then, one by one, he bade them  
look ;

And one by one they gasped, " a miracle."  
Brown sails and red, a fleet of fishing  
boats,

See how the bright foam bursts around  
their bows !

See how the bare-legged sailors walk the  
decks !

Then, quickly looking up, as if to catch  
The vision, ere it tricked them, all they saw  
Was empty sea again.

Many believed  
That all was trickery, but he bade them  
note

The colours of the boats, and count their  
sails.

Then, in a little while, the naked eye  
Saw on the sky-line certain specks that  
grew,

Took form and colour; and, within an  
hour,

Their magic fleet came foaming into port.

Whereat old senators, wagging their white  
beards,

And plucking at golden chains with stiff  
old claws

Too feeble for the sword-hilt, squeaked at  
once :

“ This glass will give us great advantages  
In time of war.”

War, war, O God of love,  
Even amidst their wonder at Thy world,  
Dazed with new beauty, gifted with new  
powers,

These old men dreamed of blood. This  
was the thought

To which all else must pander, if he hoped

Even for one hour to see those dull eyes  
blaze

At his discoveries.

“Wolves,” he called them, “wolves”;  
And yet he humoured them. He stooped  
to them,

Promised them more advantages, and  
talked

As elders do to children. You may call it  
Weakness, and yet could any man do more,  
Alone, against a world, with such a trust  
To guard for future ages? All his life  
He has had some weanling truth to guard,  
has fought

Desperately to defend it, taking cover  
Wherever he could, behind old fallen trees  
Of superstition, or ruins of old thought.  
He has read horoscopes to keep his work  
Among the stars in favour with his prince.  
I tell you this that you may understand  
What seems inconstant in him. It may be  
That he was wrong in these things, and  
must pay

A dreadful penalty. But you must explore  
His mind's great ranges, plains and lonely  
peaks

Before you know him, as I know him now.  
How could he talk to children, but in  
words

That children understand? Have not  
some said

That God Himself has made His glory  
dark

For men to bear it. In his human sphere  
My father has done this.

War was the dream  
That filmed those old men's eyes. They  
did not hear

My father, when he hinted at his hope  
Of opening up the heavens for mankind  
With that new power of bringing far things  
near.

My heart burned as I heard him; but  
they blinked

Like owls at noonday. Then I saw him  
turn,



Desperately, to humour them, from  
thoughts  
Of heaven to thoughts of warfare.

Late that night

My own dear lord and father came to me  
And whispered, with a glory in his face  
As one who has looked on things too  
beautiful  
To breathe aloud, "Come out, Celeste,  
and see  
A miracle."

I followed him. He showed me,  
Looking along his outstretched hand, a  
star,

A point of light above our olive-trees.  
It was the star called Jupiter. And then  
He bade me look again, but through his  
glass.

I feared to look at first, lest I should see  
Some wonder never meant for mortal  
eyes.

He too had felt the same, not fear, but  
awe,

As if his hand were laid upon the veil  
Between this world and heaven.

Then . . . I, too, saw,  
Small as the smallest bead of mist that  
clings

To a spider's thread at dawn, the floating  
disk

Of what had been a star, a planet now,  
And near it, with no disk that eyes could  
see,

Four needle-points of light, unseen before.  
“The moons of Jupiter,” he whispered  
low,

I have watched them as they moved, from  
night to night ;

A system like our own, although the world  
Their fourfold lights and shadows make so  
strange

Must—as I think—be mightier than we  
dreamed,

A Titan planet. Earth begins to fade  
And dwindle ; yes, the heavens are open-  
ing now.

Perhaps up there, this night, some lonely  
soul

Gazes at earth, watches our dawning moon,  
And wonders, as we wonder.”

In that dark

We knelt together . . .

Very strange to see

The vanity and fickleness of princes.

Before his enemies had provoked the wrath  
Of Rome against him, he had given the  
name

Of Medicean stars to those four moons  
In honour of Prince Cosmo. This aroused  
The court of France to seek a lasting  
place

Upon the map of heaven. A letter came  
Beseeching him to find another star  
Even more brilliant, and to call it *Henri*  
After the reigning and most brilliant prince  
Of France. They did not wish the family  
name

Of Bourbon. This would dissipate the  
glory.

No, they preferred his proper name of  
Henri.

We read it together in the garden here,  
Weeping with laughter, never dreaming  
then

That this, this, this, could stir the little  
hearts

Of men to envy.

O, but afterwards,  
The blindness of the men who thought  
themselves  
His enemies. The men who never knew  
him,

The men that had set up a thing of straw  
And called it by his name, and wished to  
burn

Their image and himself in one wild fire.  
Men ? Were they men or children ? 'They  
refused

Even to look through Galileo's glass,  
Lest seeing might persuade them. Even  
that sage,

That great Aristotelian, Julius Libri,

Holding his breath there, like a fractious  
child

Until his cheeks grew purple, and the veins  
Were bursting on his brow, swore he would  
die

Sooner than look.

And that poor monstrous babe  
Not long thereafter, kept his word and  
died,

Died of his own pent rage, as I have  
heard.

Whereat my lord and father shook his  
head

And, smiling, somewhat sadly—oh, you  
know

That smile of his, more deadly to the false  
Than even his reasoning — murmured,

“*Libri, dead,  
Who called the moons of Jupiter absurd !  
He swore he would not look at them from  
earth.*

*I hope he saw them on his way to heaven.”*

Welser in Augsburg, Clavius at Rome,

Scoffed at the fabled moons of Jupiter.  
It was a trick, they said. He had made a  
    glass  
To fool the world with false appearances.  
Perhaps the lens was flawed. Perhaps  
    his wits  
Were wandering. Anything rather than  
    the truth  
Which might disturb the mighty in their  
    seat.

“Let Galileo hold his own opinions.

I, Clavius, will hold mine.”

He wrote to Kepler :

“You, Kepler, are the first, whose open  
    mind

And lofty genius could accept for truth  
The things which I have seen. With you  
    for friend,

The abuse of the multitude will not trouble  
    me.

Jupiter stands in heaven and will stand,  
Though all the sycophants bark at him.

In Pisa

Florence, Bologna, Venice, Padua,  
Many have seen the moons. These witnesses  
Are silent and uncertain. Do you wonder ?  
Most of them could not, even when they  
saw them,  
Distinguish Mars from Jupiter. Shall we  
side  
With Heraclitus or Democritus ?  
I think, my Kepler, we will only laugh  
At this immeasurable stupidity.  
Picture the leaders of our college here.  
A thousand times I have offered them the  
proof  
Of their own eyes. They sleep here, like  
gorged snakes,  
Refusing even to look at planets, moons,  
Or telescope. They think philosophy  
Is all in books, and that the truth is found  
Neither in nature, nor the Universe,  
But in comparing texts. How you would  
laugh  
Had you but heard our first philosopher

Before the Grand Duke, trying to tear  
down

And argue the new planets out of heaven,  
Now by his own weird logic and closed  
eyes

And now by magic spells.”

How could he help  
Despising them a little ? It’s an error  
Even for a giant to despise a midge ;  
For, when the giant reels beneath some  
stroke

Of fate, the buzzing clouds will swoop  
upon him,

Cluster and feed upon his bleeding wounds,  
And do what midges can to sting him  
blind.

These human midges have not missed  
their chance. •

They have missed no smallest spot upon  
that sun.

My mother was not married—they have  
found—

To my dear father. All his children, then,



And doubtless all their thoughts are evil,  
too ;

But who that judged him ever sought to  
know

Whether, as evil sometimes wears the  
cloak

Of virtue, nobler virtue in this man  
Might wear that outward semblance of a  
sin ?

Yes, even you who love me, may believe  
These thoughts are born of my own  
tainted heart ;

And yet I write them, kneeling in my cell  
And whisper them to One who blesses me  
Here, from His Cross, upon the bare grey  
wall.

So, if you love me, bless me also, you,  
By helping him. Make plain to all you  
meet

What part his enemies have played in this.  
How some one, somehow, altered the  
command

Laid on him all those years ago, by Rome,

So that it reads to-day as if he vowed  
Never to think or breathe that this round  
earth

Moves with its sister-planets round the  
sun.

'Tis true he promised not to write or  
speak

As if this truth were 'stablished equally  
With God's eternal laws ; and so he wrote  
His Dialogues, reasoning for it, and against,  
And gave the last word to Simplicius,  
Saying that human reason must bow down  
Before the power of God.

And even this  
His enemies have twisted to a sneer  
Against the Pope, and cunningly declared  
Simplicius to be Urban.

Why, my friend,  
There were three dolphins on the title-  
page,  
Each with the tail of another in its mouth.  
The censor had not seen this, and they  
swore

It held some hidden meaning. Then they  
found

The same three dolphins sprawled on all  
the books

Landini printed at his Florence press.

They tried another charge.

I am not afraid  
Of any truth that they can bring against  
him ;

But, O, my friend, I more than fear their  
lies.

I do not fear the justice of our God ;

But I do fear the vanity of men ;

Even of Urban ; not His Holiness,

But Urban, the weak man, who may  
resent,

And in resentment rush half-way to  
meet

This cunning lie with credence. Vanity !

O, half the wrongs on earth arise from  
that !

Greed, and war's pomp, all envy, and  
most hate,

Are born of that ; while one dear humble  
heart,

Beating with love for man, between two  
thieves,

Proves more than all His wounds and  
miracles

Our Crucified to be the Son of God.

Say that I long to see him ; that my  
prayers

Knock at the gates of mercy, night and  
day.

Urge him to leave the judgment now with  
God

And strive no more.

If he be right, the stars

Fight for him in their courses. Let him  
bow

His poor, dishonoured, glorious, old grey  
head

Before this storm, and then come home  
to me.

O, quickly, or I fear 'twill be too late ;  
For I am dying. Do not tell him this ;

But I must live to hold his hands again,  
And know that he is safe.  
I dare not leave him, helpless and half  
    blind,  
Half father and half child, to rack and  
    cord.  
By all the Christ within you, save him,  
    you ;  
And, though you may have ceased to love  
    me now,  
One faithful shadow in your own last hour  
Shall watch beside you till all shadows  
    die,  
And heaven unfold to bless you where I  
    failed.

## II.

*(Scheiner writes to Castelli, after the Trial.)*

What think you of your Galileo now,  
Your hero that like Ajax should defy  
The lightning ? Yesterday I saw him  
    stand

Trembling before our court of Cardinals,  
Trembling before the colour of their robes  
As sheep, before the slaughter, at the  
sight  
And smell of blood. His lips could hardly  
speak,  
And—mark you—neither rack nor cord  
had touched him.  
Out of the Inquisition's five degrees  
Of rigor : first, the public threat of torture ;  
Second, the repetition of the threat  
Within the torture-chamber, where we  
show  
The instruments of torture to the accused ;  
Third, the undressing and the binding ;  
fourth,  
Laying him on the rack ; then, fifth and  
last,  
Torture, *territio realis* ; out of these,  
Your Galileo reached the second only,  
When, clapping both his hands against  
his sides,  
He whined about a rupture that forbade

These extreme courses. Great heroic soul  
Dropped like a cur into a sea of terror,  
He sank right under. Then he came up  
gasping,

Ready to swear, deny, abjure, recant,  
Anything, everything ! Foolish, weak, old  
man,

Who had been so proud of his discoveries,  
And dared to teach his betters. How we  
grinned

To see him kneeling there and whispering  
thus,

Through his white lips, bending his old  
grey head :

*“ I, Galileo Galilei, born*

*A Florentine, now seventy years of age,*

*Kneeling before you, having before mine  
eyes,*

*And touching with my hands the Holy  
Gospels,*

*Swear that I always have believed, do  
now,*

*And always will believe what Holy Church*

*Has held and preached and taught me to  
believe ;*

*And now, whereas I rightly am accused,  
Of heresy, having falsely held the sun  
To be the centre of our Universe,  
And also that this earth is not the centre,  
But moves ;*

*I most illogically desire  
Completely to expunge this dark suspicion,  
So reasonably conceived. I now abjure,  
Detest and curse these errors ; and I swear  
That should I know another, friend or foe,  
Holding the selfsame heresy as myself,  
I will denounce him to the Inquisitor  
In whatsoever place I chance to be.  
So help me God, and these His holy Gospels,  
Which with my hands I touch."*

You will observe  
His promise to denounce. Beware, Cas-  
telli !

What think you of your Galileo now ?



## III.

*(Castelli writes, enclosing Scheiner's letter to  
Campanella.)*

What think I ? This,—that he has laid  
his hands  
Like Samson on the pillars of our world,  
And one more trembling utterance such as  
this

Will overwhelm us all.

O, Campanella,  
You know that I am loyal to our faith,  
As Galileo too has always been.  
You know that I believe, as he be-  
lieves,  
In the one Catholic Apostolic Church ;  
Yet there are many times when I could  
wish  
That some blind Samson would indeed  
tear down  
All this proud temporal fabric, made with  
hands,

And that, once more, we suffered with our  
Lord,  
Were persecuted, crucified with Him.  
I tell you, Campanella, on that day  
When Galileo faced our Cardinals,  
A veil was rent for me. There, in one  
flash,  
I saw the eternal tragedy, transformed  
Into new terms. I saw the Christ once  
more,  
Before the court of Pilate. Peter there  
Denied Him once again ; and, as for me,  
Never has all my soul so humbly knelt  
To God in Christ, as when that sad old  
man  
Bowed his grey head, and knelt—at seventy  
years—  
To acquiesce, and shake the world with  
shame.  
*He shall not strive or cry !* Strange, is it  
not,  
How nearly Scheiner—even amidst his  
hate—

Quoted the Prophets ? Do we think this  
world

So greatly bettered, that the ancient cry,  
“ *Despised, rejected,* hails our God no  
more ? ”

## IV.

*(Celeste writes to her father in his imprisonment  
at Siena.)*

Dear father, it will seem a thousand years  
Until I see you home again and well.

I would not have you doubt that all this  
time

I have prayed for you continually. I  
saw

A copy of your sentence. I was grieved ;  
And yet it gladdened me, for I found a  
way

To be of use, by taking on myself  
Your penance. Therefore, if you fail in  
this,

If you forget it—and indeed, to save you

The trouble of remembering it—your child  
Will do it for you.

Ah, could she do more  
How willingly would your Celeste endure  
A straiter prison than she lives in now  
To set you free.

“ A prison,” I have said ;  
And yet, if you were here, ’twould not be  
so.

When you were pent in Rome, I used to  
say,

“ Would he were at Siena ! ” God fulfilled

That wish. You are at Siena ; and I now  
say

Would he were at Arcetri.

So perhaps  
Little by little, angels can be wooed •  
Each day, by some new prayer of mine or  
yours,

To bring you wholly back to me, and save  
Some few of the flying days that yet  
remain.

You see, these other Nuns have each their  
friend,

Their patron Saint, their ever near *devoto*,  
To whom they tell their joys and griefs ;  
but I

Have only you, dear father, and if you  
Were only near me, I could want no more.  
Your garden looks as if it missed your love.  
The unpruned branches lean against the  
wall

To look for you. The walks run wild with  
flowers.

Even your watch-tower seems to wait for  
you ;

And, though the fruit is not so good this  
year

(The vines were hurt by hail, I think, and  
thieves

Have climbed the wall too often for the  
pears),

The crop of peas is good, and only waits  
Your hand to gather it.

In the dovecote, too,

You'll find some plump young pigeons.

We must make

A feast for your return.

In my small plot,

Here at the Convent, better watched than  
yours,

I raised a little harvest. With the  
price

I got for it, I had three Masses said

For my dear father's sake.

V.

*(Galileo writes to his friend Castelli, after his  
return to Arcetri.)*

Castelli, O Castelli, she is dead.

I found her driving death back with her  
soul

Till I should come.

I could not even see

Her face.—These useless eyes had spent  
their power

On distant worlds, and lost that last faint  
look

Of love on earth.

I am in the dark, Castelli,  
Utterly and irreparably blind.

The Universe which once these outworn  
eyes

Enlarged so far beyond its ancient bounds  
Is henceforth shrunk into that narrow  
space

Which I myself inhabit.

Yet I found  
Even in the dark, her tears against my  
face,

Her thin soft childish arms around my  
neck,

And her voice whispering . . . love, un-  
dying love ;

Asking me, at this last, to tell her true,  
If we should meet again.

Her trust in me  
Had shaken her faith in what my judges  
held ;

And, as I felt her fingers clutch my hand,  
Like a child drowning, "Tell me the  
truth," she said,

"Before I lose the light of your dear  
face"—

It seemed so strange that dying she could  
see me

While I had lost her,—“tell me, before I  
go.”

“Believe in Love,” was all my soul could  
breathe.

I heard no answer. Only I felt her hand  
Clasp mine and hold it tighter. Then she  
died,

And left me to my darkness. Could I  
guess

At unseen glories, in this deeper night,  
Make new discoveries of profounder realms,  
Within the soul? O, could I find Him  
there,

Rise to Him through His harmonies of law  
And make His will my own!

This much, at least,



I know already, that—in some strange  
way—

His law implies His love ; for, failing that  
All grows discordant, and the primal Power  
Ignobler than His children.

So I trust  
One day to find her, waiting for me still,  
When all things are made new.

I raise this torch  
Of knowledge. It is one with my right  
hand,  
And the dark sap that keeps it burning  
flows  
Out of my heart ; and yet, for all my  
faith,  
It shows me only darkness.

Was I wrong ?  
Did I forget the subtler truth of Rome  
And, in my pride, obscure the world's one  
light ? .

Did I subordinate to this moving earth  
Our swiftlier-moving God ?

O, my Celeste,

Once, once at least, you knew far more  
than I ;  
And she is dead, Castelli, she is dead.

## VI.

*(Viviani, many years later, writes to a friend in  
England.)*

I was his last disciple, as you say  
I went to him, at seventeen years of age,  
And offered him my hands and eyes to  
use,  
When, voicing the true mind and heart  
of Rome,  
Father Castelli, his most faithful friend,  
Wrote, for my master, that compassionate  
plea ;  
*The noblest eye that Nature ever made  
Is darkened ; one so exquisitely dowered,  
So delicate in power that it beheld  
More than all other eyes in ages gone  
And opened the eyes of all that are to come.*

But, out of England, even then, there  
shone

The first ethereal promise of the light  
That crowns my master dead. Well I  
recall

That day of days. There was no faintest  
breath

Among his garden cypress-trees. They  
dreamed

Dark, on a sky too beautiful for tears,  
And the first star was trembling overhead,  
When, quietly as a messenger from heaven,  
Moving unseen, through his own purer  
    realm.

Amongst the shadows of our mortal world,  
A young man, with a strange light on his  
face

Knocked at the door of Galileo's house.  
His name was Milton.

By the hand of God,  
He, the one living soul on earth with  
power

**To read the starry soul of this blind man.**

Was led through Italy to his prison door.  
He looked on Galileo, touched his hand . . .  
*O, dark, dark, dark, amid the blaze of noon,*  
*Irrecoverably dark. . . .*

In after days,

He wrote it ; but it pulsed within him  
then ;  
And Galileo rising to his feet  
And turning on him those unseeing eyes  
That had searched heaven and seen so  
many worlds,  
Said to him, “ You have found me.”

Often he told me in those last sad months  
Of how your grave young island poet  
brought  
Peace to him, with the knowledge that, far  
off,  
In other lands, the truth he had pro-  
claimed  
Was gathering power.

Soon after, death unlocked

His prison, and the city that he loved,

Florence, his town of flowers, whose gates  
in life

He was forbid to pass, received him dead.

You write to me from England, that his  
name

Is now among the mightiest in the world,  
And in his name I thank you.

I am old ;  
And I was very young when, long ago,  
I stood beside his poor dishonoured grave  
Where hate denied him even an epitaph ;  
And I have seen, slowly and silently,  
His purer fame arising, like a moon  
In marble on the twilight of those aisles  
At Santa Croce, where the dread decree  
Was read against him.

Now, against two wrongs,  
Let me defend two victims : first, the  
Church .

Whom many have vilified for my master's  
doom ;

And second, Galileo, whom they reproach

Because they think that in his blind old

He might with one great eagle's glance  
have cowed

His judges, played the hero, raised his  
hands

Above his head, and posturing like a  
mummer

Cried (as one empty rumour now declares)  
After his recantation—*yet, it moves !*

Out of this wild confusion, fourfold wrongs  
Are heaped on both sides.—I would fain  
bring peace,

The peace of truth to both before I die ;  
And, as I hope, rest at my master's feet.

It was not Rome that tried to murder  
truth ;

But the blind hate and vanity of man,  
Had Galileo but concealed the smile

With which, like Socrates, he answered  
fools,

They would not, in the name of Christ,  
have mixed

This hemlock in His chalice.

O pitiful,  
Pitiful human hearts that must deny  
Their own unfolding heavens, for one light  
word  
Twisted by whispering malice.

Did he mean  
Simplicio, in his dialogues, for the Pope ?  
Doubtful enough—the name was borrowed  
straight  
From older dialogues.

If he gave one thought  
Of Urban's to Simplicio—you know well  
How composite are all characters in books,  
How authors find their colours here and  
there,  
And paint both saints and villains from  
themselves.

No matter. This was Urban. Make it  
clear.

Simplicio means a simpleton. The saints  
Are roused by ridicule to most human  
wrath.

Urban was once his friend. This hint of  
ours  
Kills all of that. And so we mortals  
close  
The doors of Love and Knowledge on the  
world.  
And so, for many an age, the name of  
Christ  
Has been misused by man to mask man's  
hate.  
How should the Church escape, then ? I  
who loved  
My master, know he had no truer friend  
Than many of those true servants of the  
Church,  
Fathers and priests who, in their lowlier  
sphere,  
Moved nearer than her cardinals to the  
Christ.  
These were the very Rome, and held her  
keys.  
Those who charge Rome with hatred of  
the light



Would charge the sun with darkness, and  
accuse

This dome of sky for all the blood-red  
wrongs

That men commit beneath it. Art and  
song

That found her once in Europe their sole  
shrine

And sanctuary absolve her from that  
stain.

But there's this other charge against my  
friend,

And master, Galileo. It is brought

By friends, made sharper by their pity  
and grief,

The charge that he refused his martyrdom

And so denied his own high faith.

Whose faith,—

His friends', his Protestant followers', or  
his own ?

Faced by the torture, that sublime old  
man

Was still a faithful Catholic, and his  
thought  
Plunged deeper than his Protestant fol-  
lowers knew.

His aim was not to strike a blow at Rome  
But to confound his enemies. He believed  
As humbly as Castelli or Celeste  
That there is nothing absolute but that  
Power

With which his Church confronted him.  
To this

He bowed his head, acknowledging that  
his light

Was darkness ; but affirming, all the more,  
That Ptolemy's light was even darker yet.  
Read your own Protestant Milton, who  
derived

His mighty argument from my master's  
lips :

*“ Whether the sun predominant in heaven  
Rise on the earth, or earth rise on the sun ;  
Leave them to God above ; Him serve and  
fear.”*

Just as in boyhood, when my master  
watched

The swinging lamp in the cathedral there  
At Pisa ; and, by one finger on his pulse,  
Found that, although the great bronze  
miracle swung

Through ever-shortening spaces, yet it  
moved

More slowly, and so still swung in equal  
times ;

He straight devised another boon to man,  
Those pulse - clocks which by many a  
fevered bed

Our doctors use ; dreamed of that time-  
piece, too,

Whose punctual swinging pendulum on  
earth

Measures the starry periods, and to-day  
Talks peacefully to children by the fire  
Like an old grandad full of ancient tales,  
Remembering endless ages, and foretelling  
Eternities to come ; but, all the while  
There, in the dim cathedral, he knew well,

That dreaming youngster, with his tawny  
    mane  
Of red-gold hair, and deep ethereal eyes,  
What odorous clouds of incense round him  
    rose ;  
Was conscious in the dimness, of great  
    throngs  
Kneeling around him ; shared in his own  
    heart  
The music and the silence and the cry,  
*O salutaris hostia !*—so now,  
There was no mortal conflict in his mind  
Between his dream - clocks and things  
    absolute,  
And one far voice, most absolute of all,  
Feeble with suffering, calling night and day  
“ *Return, return,*” the voice of his Celeste.  
All these things co-existed, and the less  
Were comprehended, like the swinging  
    lamp,  
Within that great cathedral of his soul.  
Often he bade me, in that desolate house,  
*Il Giojello*, of old a jewel of light,

Read to him one sad letter, till he knew  
The most of it by heart, and while he  
walked

His garden, leaning on my arm, at times  
I think he quite forgot that I was there ;  
For he would quietly murmur it to him-  
self,

As if she had sent it, half an hour ago :

“ Now, with this little Winter’s gift of  
fruit

I send you, father, from our southward  
wall,

Our convent’s rarest flower, a Christmas  
rose.

At this cold season, it should please you  
much,

Seeing how rare it is ; but, with the rose,  
You must accept its thorns, which bring  
to mind

Our Lord’s own bitter Passion. Its green  
leaves

Image the hope that through His Passion  
we,

After this winter of our mortal life,  
May find the beauty of an eternal spring  
In heaven."

Praise me the martyr, out of whose agonies  
Some great new hope is born, but not the  
fool

Who starves his heart to prove what eyes  
can see

And intellect confirm throughout the world.  
Why must he follow the idiot schoolboy  
code,

Torture her soul to reinforce the sight  
Of those that closed their eyes and would  
not see.

To your own men of science, fifty turns  
Of the thumbscrew would not prove that  
earth revolved.

Call it Italian subtlety if you will,     •  
I say his intricate cause could not be won  
By blind heroics. Much that his enemies  
challenged

Was not yet wholly proven, though his  
mind

Had leapt to a certainty. He must leave  
the rest  
To those that should come after, swift and  
young,—  
Those runners with the torch for whom he  
longed  
As his deliverers. Had he chosen death  
Before his hour, his proofs had been  
obscured  
For many a year. His respite gave him  
time  
To push new pawns out, in the blindfold  
play  
Of those last months, and checkmate, not  
the Church  
But those that hid behind her. He  
believed  
His truth was all harmonious with her own.  
How could he choose between them ?  
Must he die  
To affirm a discord that himself denied ?  
On many a point, he was less sure than we :  
But surer far of much that we forget.

The movements that he saw he could but  
judge

By some fixed point in space. He chose  
the sun.

Could this be absolute? Could he then  
be sure

That this great sun did not with all its  
worlds

Move round a deeper centre? What  
became

Of your Copernicus then? Could he be  
sure

Of any unchanging centre, whence to  
judge

This myriad-marching universe, but one—  
The absolute throne of God.

Affirming this  
Eternal Rock, his own uncertainties .

Became more certain, and although his lips  
Breathed not a syllable of it, though he  
stood

Silent as earth that also seemed so still,  
The very silence thundered, *yet it moves!*



He held to what he knew, secured his  
work

Through feeble hands like mine, in other  
lands,

Not least in England, as I think you know.

For, partly through your poet, as I  
believe,

When his great music rolled upon your  
skies,

New thoughts were kindled in the general  
mind.

'Twas at Arcetri that your Milton gained  
The first great glimpse of his celestial  
realm.

Picture him,—still a prisoner of our light,  
Closing his glorious eyes—that in the dark,  
He might behold this wheeling universe,—  
The planets gilding their ethereal horns  
With sun-fire. Many a pure immortal  
phrase

In his own work, as I have pondered it,  
Lived first upon the lips of him whose  
eyes

Were darkened first,—in whom, too, Milton  
found

That Samson Agonistes, not himself,  
As many have thought, but my dear  
master dead.

These are a part of England's memories  
now,

The music blown upon her sea-bright air  
When, in the year of Galileo's death,  
Newton, the mightiest of the sons of  
light,

Was born to lift the splendour of this torch  
And carry it, as I heard that Tycho said  
Long since to Kepler, "Carry it out of  
sight,

Into the great new age I must not know,  
Into the great new realm I must not  
tread."

## V.

## NEWTON.

## I.

“ IF I saw farther, ’twas because I stood  
On giant shoulders,” wrote the king of  
thought,  
Too proud of his great line to slight the  
toils  
Of his forebears. He turned to their dim  
past,  
Their fading victories and their fond de-  
feats,  
And knelt as at an altar, drawing all  
Their strengths into his own ; and so went  
forth  
With all their glory shining in his face,  
To win new victories for the age to come.

So, where Copernicus had destroyed the  
dream

We called our world ; where Galileo  
watched

Those ancient firmaments melt, a thin  
blue smoke

Into a vaster night ; where Kepler heard  
Only stray fragments, isolated chords  
Of that tremendous music which should  
bind

All things anew in one, Newton arose  
And carried on their fire.

Around him reeled

Through lingering fumes of hate and clouds  
of doubt,

Lit by the afterglow of the Civil War,  
The dissolute throngs of that Walpurgis  
night .

Where all the cynical spirits that deny  
Danced with the vicious lusts that drown  
the soul

In flesh too gross for Circe or her  
swine.

But, in his heart, he heard one instant  
voice.

*“On with the torch once more, make all  
things new,  
Build the new heaven and earth, and save  
the world.”*

Ah, but the infinite patience, the long  
months

Lavished on tasks that, to the common eye,  
Were insignificant, never to be crowned  
With great results, or even with earth's  
rewards.

Could Rembrandt but have painted him,  
in those hours

Making his first analysis of light  
Alone, there, in his darkened Cambridge  
room

At Trinity! Could he have painted, too,  
The secret glow, the mystery, and the  
power,

The sense of all the thoughts and unseen  
spires

That soared to heaven around him !

He stood there,  
Obscure, unknown, the shadow of a man  
In darkness, like a grey dishevelled ghost,  
—Bare-throated, down at heel, his last  
    night's supper  
Littering his desk, untouched ; his glim-  
    mering face,  
Under his tangled hair, intent and still,—  
Preparing our new universe.

He caught  
The sunbeam striking through that bullet-  
    hole  
In his closed shutter—a round white spot  
    of light  
Upon a small dark screen.

He interposed  
A prism of glass. He saw the sunbeam  
    break  
And spread upon the screen its rainbow  
    band  
Of disentangled colours, all in scale  
Like notes in music ; first, the violet ray,

Then indigo, trembling softly into blue ;  
Then green and yellow, quivering side by  
side ;

Then orange, mellowing richly into red.

Then, in the screen, he made a small  
round hole

Like to the first ; and through it passed  
once more

Each separate coloured ray. He let it  
strike

Another prism of glass, and saw each hue  
Bent at a different angle from its path,  
The red the least, the violet ray the most ;  
But all in scale and order, all precise  
As notes in music. Last, he took a lens,  
And, passing through it all those coloured  
rays,

Drew them together again, remerging all  
On that dark screen, in one white spot of  
light.

So, watching, testing, proving, he resolved  
The seeming random glories of our day

Into a constant harmony, and found  
 How in the whiteness of the sunlight sleep  
 Compounded, all the colours of the world.  
 He saw how raindrops in the clouds of  
     heaven  
 Breaking the light, revealed that sevenfold  
     arch  
 Of colours, ranged as on his own dark  
     screen,  
 Though now they spanned the mountains  
     and wild seas.  
 Then, where that old-world order had gone  
     down  
 Beneath a darker deluge, he beheld  
 Gleams of the great new order and re-  
     called  
 —Fraught with new meaning and a deeper  
     hope—  
 That covenant which God made with all  
     mankind  
 Throughout all generations : *I will set*  
*My bow in the cloud, that henceforth ye*  
     *may know*



*How deeper than the wreckage of your  
dreams*

*Abides My law, in beauty and in power.*

## II.

Yet for that exquisite balance of the mind,  
He, too, must pay the price. He stood  
alone

Bewildered, at the sudden assault of fools  
On this, his first discovery.

“ I have lost  
The most substantial blessing of my quiet  
To follow a vain shadow.

I would fain  
Attempt no more. So few can understand,  
Or read one thought. So many are ready  
at once

To swoop and sting. Indeed I would  
withdraw

For ever from philosophy.” So he wrote  
In grief, the mightiest mind of that new  
age.

Let those who'd stone the Roman Curia  
For all the griefs that Galileo knew  
Remember the dark hours that well-nigh  
    quenched  
The splendour of that spirit. He could  
    not sleep.  
Yet, with that patience of the God in man  
That still must seek the Splendour whence  
    it came,  
Through midnight hours of mockery and  
    defeat,  
In loneliness and hopelessness and tears,  
He laboured on. He had no power to see  
How, after many years, when he was  
    dead,  
Out of this new discovery men should  
    make  
An instrument to explore the farthest stars  
And, delicately dividing their white rays,  
Divine what metals in their beauty burned,  
Extort red secrets from the heart of Mars,  
Or measure the molten iron in the sun.  
He bent himself to nearer, lowlier tasks ;

And seeing, first, that those deflected rays,  
Though it were only by the faintest bloom  
Of colour, imperceptible to our eyes,  
Must dim the vision of Galileo's glass,  
He made his own new weapon of the sky,—  
That first reflecting telescope which should  
    hold  
In its deep mirror, as in a breathless pool  
The undistorted image of a star.

## III.

In that deep night where Galileo groped  
Like a blind giant in dreams to find what  
    power  
Held moons and planets to their constant  
    road  
Through vastness, ordered like a moving  
    fleet ;  
What law so married them that they could  
    not clash  
Or sunder, but still kept their rhythmic  
    pace

As if those ancient tales indeed were true  
And some great angel helmed each gliding  
    sphere ;  
Many had sought an answer. Many had  
    caught  
Gleams of the truth ; and yet, as when a  
    torch  
Is waved above a multitude at night,  
And shows wild streams of faces, all con-  
    fused,  
But not the single law that knits them all  
Into an ordered nation, so our skies  
For all those fragmentary glimpses, whirled  
In chaos, till one eagle-spirit soared,  
Found the one law that bound them all  
    in one,  
And through that awful unity upraised  
The soul to That which made and guides  
    them all.

Did Newton, dreaming in his orchard  
    there  
Beside the dreaming Witham, see the moon

Burn like a huge gold apple in the  
boughs

And wonder why should moons not fall  
like fruit ?

Or did he see as those old tales declare  
(Those fairy-tales that gather form and  
fire

Till, in one jewel, they pack the whole  
bright world)

A ripe fruit fall from some immortal  
tree

Of knowledge, while he wondered at what  
height

Would this earth-magnet lose its darkling  
power ?

Would not the fruit fall earthward, though  
it grew

High o'er the hills as yonder brightening  
cloud ?

Would not the selfsame power that plucked  
the fruit

Draw the white moon, then, sailing in the  
blue ?

Then, in one flash, as light and song are  
born,  
And the soul wakes, he saw it—this dark  
earth  
Holding the moon that else would fly  
through space  
To her sure orbit, as a stone is held  
In a whirled sling ; and, by the selfsame  
power,  
Her sister planets guiding all their moons ;  
While, exquisitely balanced and controlled  
In one vast system, moons and planets  
wheeled  
Around one sovran majesty the sun.

## IV.

Light and more light ! the spark from  
heaven was there,  
The flash of that reintegrating fire  
Flung from heaven's altars, where all light  
is born,  
To feed the imagination of mankind

With vision, and reveal all worlds in one.  
But let no dreamer dream that his great  
work

Sprang, armed, like Pallas from the Thun-  
derer's brain.

With infinite patience he must test and  
prove

His vision now, in those clear courts of  
Truth

Whose absolute laws (bemocked by shal-  
lower minds

As less than dreams, less than the faithless  
faith

That fears the Truth, lest Truth should  
slay the dream)

Are man's one guide to his transcendent  
heaven ;

For 'there's no wandering splendour in the  
soul,

But in the highest heaven of all is one  
With absolute reality. None can climb  
Back to that Fount of Beauty but through  
pain.

Long, long he toiled, comparing first the  
curves

Traced by the cannon-ball as it soared and  
fell

With that great curving road across the  
sky

Traced by the sailing moon.

Was earth a loadstone  
Holding them to their paths by that dark  
force

Whose mystery men have cloaked beneath  
a name ?

Yet, when he came to test and prove, he  
found

That all the great deflections of the moon,  
Her shining cadences from the path  
direct,

Were utterly inharmonious with the law  
Of that dark force, at such a distance act-  
ing,

Measured from earth's own centre. . . .

For three long years, Newton withheld  
his hope



Until that day when light was brought  
from France,

New light, new hope, in one small glisten-  
ing fact,

Clear-cut as any diamond ; and to him  
Loaded with all significance, like the point  
Of light that shows where constellations  
burn.

Picard in France—all glory to her name  
Who is herself a light among all lands—  
Had measured earth's diameter once more  
And with a new precision.

To the throng,  
Those few corrected ciphers, his results  
Were less than nothing ; yet they changed  
the world.

For Newton seized them and, with trem-  
bling hands,

Began to work his problem out anew.

Then, then, as on the page those figures  
turned

To hieroglyphs of heaven, and he beheld  
The moving moon, with awful cadences

Falling into the path his law ordained,  
Even to the foot and second, his hand  
shook

And dropped the pencil.

“Work it out for me,”

He cried to those around him ; for the  
weight

Of that celestial music overwhelmed him ;  
And, on his page, those burning hiero-  
glyphs

Were Thrones and Principalities and  
Powers . . .

For far beyond, immeasurably far

Beyond our sun, he saw that river of suns  
We call the Milky Way, that glittering  
host

Powdering the night, each grain a solar  
blaze .

Divided from its neighbour by a gulf

Too wide for thought to measure ; each a  
sun

Huger than ours, with its own fleet of  
worlds,

Visible and invisible. Those bright throngs  
That seemed dispersed like a defeated host  
Through blindly wandering skies, now, at  
the word

Of one great dreamer, height o'er height  
revealed

Hints of a vaster order, and moved on  
In boundless intricacies of harmony  
Around one centre, deeper than all suns,  
The burning throne of God.

## v.

He could not sleep. That intellect, whose  
wings

Dared the cold ultimate heights of Space  
and Time

Sank, like a wounded eagle, with dazed  
eyes

Back, headlong through the clouds to  
throb on earth.

What shaft had pierced him ? That which  
also pierced

His great forebears—the hate of little men.  
They flocked around him, and they flung  
    their dust

Into the sensitive eyes, and laughed to see  
How dust could blind them.

    If one prickling grain  
Could so put out his vision and so torment  
That delicate brain, what weakness ! How  
    the mind

That seemed to dwarf us, dwindle ! Is he  
    mad ?

So buzzed the fools, whose ponderous  
    mental wheels

Nor dust, nor grit, nor stones, nor rocks  
    could irk

Even for an instant.

    Newton could not sleep,  
But all that careful malice could design  
Was blindly fostered by well-meaning folly,  
And great sane folk like Mr Samuel Pepys  
Canvassed his weakness and slept sound  
    all night.

For little Samuel with his rosy face

Came chirping into a coffee-house one day  
Like a plump robin, "Sir, the unhappy  
state

Of Mr Isaac Newton grieves me much.  
Last week I had a letter from him, filled  
With strange complainings, very curious  
hints,

Such as, I grieve to say, are common  
signs

—I have observed it often—of worse to  
come.

He said that he could neither eat nor  
sleep

Because of all the embroilments he was in,  
Hinting at nameless enemies. Then he  
begged

My pardon, very strangely. I believe  
Physicians would confirm me in my fears.  
'Tis very sad. . . . Only last night, I  
found

Among my papers certain lines composed  
By—whom d'you think?—My lord of  
Halifax

(Or so dear Mrs Porterhouse assured me)  
Expressing, sir, the uttermost satisfaction  
In Mr Newton's talent. Sir, he wrote  
Answering the charge that science would  
    put out  
The light of beauty, these very handsome  
    lines :

“ When Newton walked by Witham stream  
    There fell no chilling shade  
To blight the drifting naiad's dream  
    Or make her garland fade.

The mist of sun was not less bright  
    That crowned Urania's hair.  
He robbed it of its colder light,  
    But left the rainbow there.”

They are very neat and handsome, you'll  
    agree.  
Solid in sense as Dryden at his best,  
And smooth as Waller, but with something  
    more,—

That touch of grace, that airier elegance  
Which only rank can give.

'Tis very sad  
That one so nobly praised should—well, no  
matter !—

I am told, sir, that these troubles all  
began

At Cambridge, when his manuscripts were  
burned.

He had been working, in his curious way,  
All through the night ; and, in the morning  
greyness

Went down to chapel, leaving on his desk  
A lighted candle. You can imagine it,—

A sadly sloven altar to his Muse,  
Littered with papers, cups, and greasy  
plates

Of untouched food. I am told that he  
would eat

His Monday's breakfast, sir, on Tuesday  
morning,

Such was his absent way !

When he returned,

He found that Diamond (his little dog  
Named Diamond, for a black patch near  
his tail)

Had overturned the candle. All his work  
Was burned to ashes.

It struck him to the quick,  
Though, when his terrier fawned about  
his feet,

He showed no anger. He was heard to  
say,

“O Diamond, Diamond, little do you  
know . . .”

But, from that hour, ah well, we'll say no  
more.

Halley was there that day, and spoke up  
sharply,

“Sir, there are hints and hints ! Do you  
*mean* more ? ”

—“I do, sir,” chirruped Samuel, mightily  
pleased

To find all eyes, for once, on his fat face.

“I fear his intellects are disordered, sir.”



—"Good! That's an answer! I can deal  
with that.

But tell me first," quoth Halley, "why he  
wrote

That letter, a week ago, to Mr Pepys."

—"Why, sir," piped Samuel, innocent of  
the trap.

"I had an argument in this coffee-house  
Last week, with certain gentlemen, on the  
laws

Of chance, and what fair hopes a man  
might have

Of throwing six at dice. I happened to  
say

That Mr Isaac Newton was my friend,  
And promised I would sound him."

"Sir," said Halley,

"You'll pardon me, but I forgot to tell  
you

I heard, a minute since, outside these  
doors,

A very modish woman of the town,  
Or else a most delicious lady of fashion,

A melting creature with a bold black  
eye,

A bosom like twin doves ; and, sir, a  
mouth

Like a Turk's dream of Paradise. She  
cooed,

' Is Mr Pepys within ? ' I greatly fear  
That they denied you to her ! "

Off ran Pepys !

" A hint's a hint," laughed Halley, " and  
so to bed."

But, as for Isaac Newton, let me say,  
Whatever his embroilments were, he solved  
With just one hour of thought, not long  
ago

The problem set by Leibnitz as a challenge  
To all of Europe. He published his result  
Anonymously, but Leibnitz, when he saw it,  
Cried out, at once, old enemy as he was,  
" That's Newton, none but Newton ! From  
this claw

I know the old lion, in his midnight lair."

## VI.

*(Sir Isaac Newton writes to Mrs Vincent  
at Woolthorpe.)*

Your letter, on my eightieth birthday,  
wakes  
Memories, like violets, in this London  
gloom.  
You have never failed, for more than three-  
score years,  
To send these annual greetings from the  
haunts  
Where you and I were boy and girl to-  
gether.  
A day must come—it cannot now be far—  
When I shall have no power to thank you  
• for them,  
So let me tell you now that, all my life,  
They have come to me with healing in  
their wings  
Like birds from home, birds from the  
happy woods

Above the Witham, where you walked  
with me

When you and I were young.

Do you remember  
Old Barley—how he tried to teach us  
drawing ?

He found some promise, I believe, in you,  
But quite despaired of me.

I treasure all  
Those little sketches that you sent to me  
Each Christmas, carrying each some  
glimpse of home.

There's one I love that shows the narrow  
lane

Behind the schoolhouse, where I had that  
bout

Of schoolboy fisticuffs. I have never  
known •

More pleasure, I believe, than when I beat  
That black-haired bully and won, for my  
reward,

Those April smiles from you.

I see you still

Standing among the fox-gloves in the  
hedge ;

And just behind you, in the field, I know  
There was a patch of aromatic flowers,—  
Rest-harrow, was it ? Yes ; their tangled  
roots

Pluck at the harrow ; halt the sharp  
harrow of thought,  
Even in old age. I never breathe their  
scent

But I am back in boyhood, dreaming there  
Over some book, among the diligent bees,  
Until you join me, and we dream together.

They called me lazy, then. Oddly enough  
It was that fight that stirred my mind to  
beat

My bully at his books, and head the  
‘ school ;

Blind rivalry, at first. By such fond tricks  
The invisible Power that shapes us—not  
ourselves—

Punishes, teaches, leads us gently on  
Like children, all our lives, until we grasp

A sudden meaning and are born, through  
death

Into full knowledge that our Guide was  
Love.

Another picture shows those woods of  
ours,

Around whose warm dark edges in the  
spring

Primroses, knots of living sunlight, woke ;  
And, always, you, their radiant shepherdess  
From Elfland, lead them rambling back  
for me,

The dew still clinging to their golden fleece,  
Through these grey memory-mists.

Another shows  
My old sun-dial. You say that it is known  
As "Isaac's dial" still. I took great  
pains •

To set it rightly. If it has not shifted  
'Twill mark the time long after I am gone ;  
Not like those curious water-clocks I made,  
Do you remember ? They worked well at  
first ;

But the least particles in the water clogged  
The holes through which it dripped ; and  
so, one day,

We two came home so late that we were  
sent

Supperless to our beds ; and suffered  
much

From the world's harshness, as we thought  
it then.

Would God that we might taste that  
harshness now.

I cannot send you what you've sent to me ;  
And so I wish you'll never thank me  
more

For those poor gifts I have sent from  
year to year.

I send another, and hope that you can  
use it

To buy yourself those comforts which you  
need

This Christmas-time.

How strange it is to wake

And find that half a century has gone by,  
With all our endless youth.

They talk to me  
Of my discoveries, prate of undying fame  
Too late to help me. Anything I achieved  
Was done through work and patience ;  
and the men  
Who sought quick roads to glory for  
themselves  
Were capable of neither. So I won  
Their hatred, and it often hampered me,  
Because it vexed my mind.

This world of ours  
Would give me all, now I have ceased to  
want it ;  
For I sit here, alone, a sad old man,  
Sipping his orange-water, nodding to sleep,  
Not caring any more for aught they say,  
Not caring any more for praise or blame ;  
But dreaming—things we dreamed of, long  
ago,  
In childhood.

You and I had laughed away



That boy and girl affair. We were too  
poor

For anything but laughter.

I am old ;

And you, twice wedded and twice widowed,  
still

Retain, through all your nearer joys and  
griefs,

The old affection. Vaguely our blind old  
hands

Grope for each other in this growing dark  
And deepening loneliness,—to say “good-  
bye.”

Would that my words could tell you all  
my heart ;

But even my words grow old.

Perhaps these lines,

Written not long ago, may tell you  
more.

I have no skill in verse, despite the  
praise

Your kindness gave me, once ; but since  
I wrote

Thinking of you, among the woods of  
home,  
My heart was in them. Let them turn to  
yours :

*Give me, for friends, my own true folk  
Who kept the very word they spoke ;  
Whose quiet prayers, from day to day,  
Have brought the heavens about my way.*

*Not those whose intellectual pride  
Would quench the only lights that guide ;  
Confuse the lines 'twixt good and ill  
Then throne their own capricious will ;*

*Not those whose eyes in mockery scan  
The deeper, simpler dreams of man ;  
Not those keen wits, so quick to hurt,  
So swift to trip you in the dirt.*

*Not those who'd pluck your mystery out,  
Yet never saw your last redoubt ;  
Whose cleverness would kill the song  
Dead at your heart, then prove you wrong.*

*Give me those eyes I used to know  
Where thoughts like angels come and go ;  
—Not glittering eyes, nor dimmed by books,  
But eyes through which the deep soul  
looks.*

*Give me the quiet hands and face  
That never strove for fame and place ;  
The soul whose love, so many a day,  
Has brought the heavens about my way.*

## VII.

*Was it a dream, that low dim-lighted room  
With that dark periwigged phantom of Dean  
Swift  
Writing, beside a fire, to one he loved,—  
Beautiful Catherine Barton, once the light  
Of Newton's house, and his half-sister's  
child ?*

*“ Yes, Catherine Barton, I am brave  
enough  
To face this pale, unhappy, wistful ghost*

Of our departed friendship.

It was I  
Savage and mad, a snarling kennel of sins,  
“Your Holiness,” as you called me, with  
that smile  
Which even your ghost would quietly turn  
on me—  
Who raised it up. It has no terrors, dear,  
And I shall never lay it while I live.  
You write to me. You think I have the  
power  
To shield the fame of Newton from a lie.  
Poor little ghost! You think I hold the  
keys  
Not only of Parnassus, then, but hell.

There is a tale abroad that Newton owed  
His public office to Lord Halifax, .  
Your secret lover. Coarseness, as you  
know,  
Is my peculiar privilege. I'll be plain,  
And let them wince who are whispering in  
the dark.

They are hinting that he gained his public  
post

Through you, his flesh and blood ; and  
that he knew

You were his patron's mistress !

Yes, I know

The coffee-house that hatched it—to be  
scotched,

Nay, killed, before one snuff-box could say  
“ snap,”

Had not one cold malevolent face been  
there

Listening,—that crystal-minded lover of  
truth,

That lucid enemy of all lies,—Voltaire.

I am told he is doing much to spread the  
light

Of Newton's great discoveries, there, in  
France.

There's little fear that France, whose  
clear keen eyes

Have missed no morning in the realm of  
thought,

Would fail to see it ; and smaller need to  
lift

A brand from hell to illume the light from  
heaven.

You fear he'll print his lie. No doubt of  
that.

I can foresee the phrase, as Halley saw  
The advent of his comet,—*jolie nièce*,  
*Assez aimable*, . . . then he'll give your  
name

As *Madame Conduit*, adding just that spice  
Of infidelity that the dates admit  
To none but these truth-lovers. It will be  
best

Not to enlighten him, or he'll change his  
tale

And make an answer difficult. Let him  
print

This truth as he conceives it, and you'll  
need

No more defence.

All history then shall damn his death-cold  
lie

And show you for the laughing child you  
were

When Newton won his office.

For yourself

You say you have no fear. Your only  
thought

Is that they'll soil his fame. Ah yes,  
they'll try,

But they'll not hurt it. For all time to  
come

It stands there, firm as marble and as  
pure.

They can do nothing that the sun and  
rain

Will not erase at last. Not even Voltaire  
Can hurt that noble memory. Think of  
him

As of a viper writhing at the base  
Of some great statue. Let the venomous  
tongue

Flicker against that marble as it may  
It cannot wound it.

I am far more grieved

For you, who sit there wondering now,  
too late,

If it were some suspicion, some dark hint  
Newton had heard that robbed him of his

And almost broke his mind up. I recall  
How the town buzzed that Newton had  
gone mad.

You copy me that sad letter which he  
wrote

To Locke, wherein he begs him to forgive  
The hard words he had spoken, thinking  
Locke

Had tried to embroil him, as he says,  
with women ;

A piteous, humble letter.

Had he heard  
Some hint of scandal that he could not  
breathe

To you, because he honoured you too  
well ?

I cannot tell. His mind was greatly  
troubled



With other things. At least, you need not  
fear

That Newton thought it true. He walked  
aloof,

Treading a deeper, stranger world than ours.  
Have you not told me how he would forget  
Even to eat and drink, when he was wrapt  
In those miraculous new discoveries,  
And, under this wild maze of shadow and  
sun

Beheld—though not the Master Player's  
hand—

The keys from which His organ music rolls,  
Those visible symphonies of wild cloud and  
light

Which clothe the invisible world for mortal  
eyes.

I have heard that Leibnitz whispered to  
the court

That Newton was an "atheist." Leibnitz  
knew

His audience. He could stoop to it.

Fools have said

That knowledge drives out wonder from  
the world ;  
They'll say it still, though all the dust's  
ablaze  
With miracles at their feet ; while New-  
ton's laws  
Foretell that knowledge one day shall be  
song,  
And those whom Truth has taken to her  
heart  
Find that it beats in music.

Even this age  
Has glimmerings of it. Newton never saw  
His own full victory ; but at least he knew  
That all the world was linked in one  
again ;  
And, if men found new worlds in years to  
come,  
These too must join the universal song.

That's why true poets love him ; and you'll  
find  
Their love will cancel all that hate can do.

They are the sentinels of the House of  
Fame ;

And that quick challenging couplet from  
the pen

Of Alexander Pope is answer enough  
To all those whisperers round the outer  
doors.

There's Addison, too. The very spirit and  
thought

Of Newton moved to music when he wrote  
*The Spacious Firmament*. Some keen-eyed  
age to come

Will say, though Newton seldom wrote a  
verse,

That music was his own and speaks his  
faith.

And, last, for those who doubt his faith  
in God

And man's immortal destiny, there re-  
mains

The granite monument of his own great  
work,

That dark cathedral of man's intellect,  
The vast 'Principia,' pointing to the skies,  
Wherein our intellectual king proclaimed  
The task of science,—through this wilder-  
ness

Of Time and Space and false appearances,  
To make the path straight from effect to  
cause,

Until we come to that First Cause of all,  
The Power, above, beyond the blind  
machine,

The Primal Power, the originating Power,  
Which cannot be mechanical. He affirmed  
it

With absolute certainty. Whence arises  
all

This order, this unbroken chain of law,  
This human will, this death-defying love ?  
Whence, but from some divine tran-  
scendent Power,

Not less, but infinitely more than these,  
Because it is their Fountain and their  
Guide.

Fools in their hearts have said, “ Whence  
comes this Power,

Why throw the riddle back this one stage  
more ? ”

And Newton, from a height above all  
worlds

Answered and answers still :

“ This universe  
Exists, and by that one impossible fact  
Declares itself a miracle ; postulates  
An infinite Power within itself, a Whole  
Greater than any part, a Unity  
Sustaining all, binding all worlds in one.  
This is the Mystery, palpable here and now,  
'Tis not the lack of links within the chain  
From cause to cause, but that the chain  
exists ;

That's the unfathomable mystery,  
The one unquestioned miracle that we  
*know,*

Implying every attribute of God,  
The ultimate, absolute, omnipresent Power,  
In its own being, deep and high as heaven.

But men still trace the greater to the less,  
Account for soul with flesh and dreams  
    with dust,  
Forgetting in their manifold world the  
    One,  
In whom for every splendour shining here  
Abides an equal power behind the veil.  
Was the eye contrived by blindly moving  
    atoms,  
Or the still-listening ear fulfilled with music  
By forces without knowledge of sweet  
    sounds ?  
Are nerves and brain so sensitively  
    fashioned  
That they convey these pictures of the  
    world  
Into the very substance of our life,  
While That from which we came, 'the  
    Power that made us,  
Is drowned in blank unconsciousness of  
    all ?  
Does it not from the things we know  
    appear

That there exists a Being, incorporeal,  
Living, intelligent, who in infinite space,  
As in His infinite sensory, perceives  
Things in themselves, by His immediate  
presence

Everywhere ? Of which things, we see no  
more

Than images only, flashed through nerves  
and brain

To our small sensories ?

What is all science then  
But pure religion, seeking everywhere  
The true commandments, and through  
many forms

The eternal power that binds all worlds in  
one ?

It is man's age-long struggle to draw near  
His maker, learn His thoughts, discern  
His law,—

A boundless task, in whose infinitude,  
As in the unfolding light and law of  
love,

Abides our hope, and our eternal joy.

I know not how my work may seem to  
others——”

So wrote our mightiest mind—“ But to  
myself

I seem a child that, wandering all day long  
Upon the sea-shore, gathers here a shell,  
And there a pebble, coloured by the wave,  
While the great ocean of truth, from sky  
to sky

Stretches before him, boundless, unex-  
plored.”

He has explored it now, and needs of me  
Neither defence nor tribute. His own  
work

Remains his monument. He rose at last  
so near

The Power divine that none can nearer go ;  
None in this age ! To carry on his fire  
We must await a mightier age to come.



## VI.

## WILLIAM HERSCHEL CONDUCTS.

*Was it a dream?—that crowded concert-  
room*

*In Bath ; that sea of ruffles and laced  
coats ;*

*And William Herschel, in his powdered wig,  
Waiting upon the platform, to conduct  
His choir and Linley's orchestra ? He stood  
Tapping his music-rest, lost in his own  
thoughts*

*And (did I hear or dream them ?) all were  
mine :*

My periwig's askew, my ruffle stained  
With grease from my new telescope !

Ach, to-morrow

How Caroline will be vexed, although she  
grows

Almost as bad as I, who cannot leave  
My workshop for one evening.

I must give  
One last recital at St Margaret's,  
And then—farewell to music.

Who can lead  
Two lives at once ?

Yet—it has taught me much,  
Thrown curious lights upon our world, to  
pass

From one life to another. Much that I  
took

For substance turns to shadow. I shall  
see

No throngs like this again ; wring no more  
praise

Out of their hearts ; forego that instant joy  
—Let those who have not known it count  
it vain—

When human souls at once respond to  
yours.

Here, on the brink of fortune and of fame,  
As men account these things, the moment  
comes

When I must choose between them and  
the stars ;

And I have chosen.

Handel, good old friend,  
We part to-night. Hereafter, I must  
watch

That other wand, to which the worlds  
keep time.

What has decided me ? That marvellous  
night

When—ah, how difficult it will be to guide,  
With all these wonders whirling through  
my brain !—

After a Pump-room concert I came home  
Hot-foot, out of the fluttering sea of fans,  
Coquelicot-ribboned belles and periwigged  
beaux,

To my Newtonian telescope.

The design

Was his ; but more than half the joy my  
own,

Because it was the work of my own hand,  
A new one, with an eye six inches wide,  
Better than even the best that Newton  
made.

Then, as I turned it on the *Gemini*,  
And the deep stillness of those constant  
lights,

Castor and Pollux, lucid pilot-stars,  
Began to calm the fever of my blood,  
I saw, O, first of all mankind I saw  
The disk of my new planet gliding there  
Beyond our tumults, in that realm of  
peace.

What will they christen it ? Ach—not  
*Herschel*, no ! .

Nor *Georgium Sidus*, as I once proposed ;  
Although he scarce could lose it, as he lost  
That world in 'seventy-six.

Indeed, so far  
From trying to tax it, he has granted me

How much ?—two hundred golden pounds  
a year,

In the great name of science,—half the cost  
Of one state-coach, with all those worlds  
to win !

Well—well—we must be grateful. This  
mad king

Has done far more than all the worldly-wise,  
Who'll charge even this to madness.

I believe  
One day he'll have me pardoned for that  
. . . crime,

When I escaped—deserted, some would  
say—

From those drill-sergeants in my native  
land ;

Deserted drill for music, as I now  
Desert my music for the orchestral spheres.  
No. This new planet is only new to man.  
His majesty has done much. Yet, as my  
friend

Declared last night, “ Never did monarch  
buy

Honour so cheaply ” ; and—he has not  
bought it.

I think that it should bear some ancient  
name,

And wear it like a crown ; some deep,  
dark name,

Like *Uranus*, known to remoter gods.

How strange it seems—this buzzing concert-room !

There’s Doctor Burney bowing and, behind  
him,

His fox-eyed daughter Fanny.

Is it a dream,  
These crowding midgets, dense as clustering  
bees

In some great bee-skep ?

Now, as I lift my wand,  
A silence grips them, and the strings  
begin,

Throbbing. The faint lights flicker in  
gusts of sound.

Before me, glimmering like a crescent moon,

The dim half circle of the choir awaits  
Its own appointed time.

Beside me now,  
Watching my wand, plump and immacu-  
late

From buckled shoes to that white bunch  
of lace

Under his chin, the midget tenor rises,  
Music in hand, a linnet and a king.

The bullfinch bass, that other emperor,  
Leans back indifferently, and clears his  
throat

As if to say, "This prelude leads to  
*Me!*"

While, on their own proud thrones, on  
either hand,

The sumptuously bosomed midget queens,  
Contralto and soprano, jealously eye  
Each other's plumage.

Round me the music throbs  
With an immortal passion. I grow aware  
Of an appalling mystery. . . . We, this  
throng

Of midgets, playing, listening, tense and  
still,  
Are sailing on a midget ball of dust  
We call our planet ; will have sailed  
through space  
Ten thousand leagues before this music ends.  
What does it mean ? O, God, what *can* it  
mean ?—  
This weird hushed ant-hill with a thousand  
eyes ;  
These midget periwigs ; all those little  
blurs,  
Tier over tier, of faces, masks of flesh,  
Corruptible, hiding each its hopes and  
dreams,  
Its tragi-comic dreams.  
And all this throng  
Will be forgotten, mixed with dust, crushed  
out,  
Before this book of music is outworn  
Or that tall organ crumbles. Violins  
Outlast their players. Other hands may  
touch



That harpsichord ; but ere this planet  
makes

Another threescore journeys round its sun,  
These breathing listeners will have vanished. Whither ?

I watch my moving hands, and they grow  
strange !

What is it moves this body ? What am I ?  
How came I here, a ghost, to hear that  
voice

Of infinite compassion, far away,  
Above the throbbing strings, hark ! *Com-*  
*fort ye . . .*

If music lead us to a cry like this,  
I think I shall not lose it in the skies.  
I do but follow its own secret law  
As long ago I sought to understand  
Its golden mathematics ; taught myself  
The way to lay one stone upon another,  
Before I dared to dream that I might  
build

My Holy City of Song. I gave myself

To all its branches. How they stared at me,  
Those men of “sensibility,” when I said  
That algebra, conic sections, fluxions, all  
Pertained to music. Let them stare again.  
Old Kepler knew, by instinct, what I now  
Desire to learn. I have resolved to leave  
No tract of heaven unvisited.

To-night,

—The music carries me back to it again !—  
I see beyond this island universe,  
Beyond our sun, and all those other suns  
That throng the Milky Way, far, far  
    beyond,  
A thousand little wisps, faint nebulae,  
Luminous fans and milky streaks of fire ;  
Some like soft brushes of electric mist  
Streaming from one bright point ; others  
    that spread  
And branch, like growing systems ; others  
    discrete,  
Keen, ripe, with stars in clusters ; others  
    drawn back  
By central forces into one dense death,

Thence to be kindled into fire, reborn,  
And scattered abroad once more in a  
    delicate spray  
Faint as the mist by one bright dewdrop  
    breathed  
At dawn, and yet a universe like our own ;  
Each wisp a universe, a vast galaxy  
Wide as our night of stars.

The Milky Way

In which our sun is drowned, to these  
    would seem  
Less than to us their faintest drift of haze ;  
Yet we, who are borne on one dark grain  
    of dust  
Around one indistinguishable spark  
Of star-mist, lost in one lost feather of  
    light,  
Can by the strength of our own thought,  
    ascend  
Through universe after universe ; trace  
    their growth  
Through boundless time, their glory, their  
    decay ;

And, on the invisible road of law, more  
firm  
Than granite, range through all their  
length and breadth,  
Their height and depth, past, present, and  
to come.  
So, those who follow the great Work-  
master's law  
From small things up to great, may one  
day learn  
The structure of the heavens, discern the  
whole  
Within the part, as men through Love see  
God.

Oh, holy night, deep night of stars, whose  
peace  
Descends upon the troubled mind • like  
dew,  
Healing it with the sense of that pure  
reign  
Of constant law, enduring through all  
change ;

Shall I not, one day, after faithful years,  
Find that thy heavens are built on music,  
    too,  
And hear, once more, above thy throbbing  
    worlds  
This voice of all compassion, *Comfort ye,—*  
*Yes—comfort ye, my people, saith your God ?*

## VII.

SIR JOHN HERSCHEL  
REMEMBERS.

TRUE type of all, from his own father's  
     hand  
 He caught the fire ; and, though he  
     carried it far  
 Into new regions ; and, from southern  
     fields  
 Of yellow lupin, added host on host  
 To those bright armies which his father  
     knew,  
 Surely the crowning hour of all his life  
 Was when, his task accomplished, he  
     returned  
 A lonely pilgrim to the twilit shrine  
 Of first beginnings and his father's youth

There, in the Octagon Chapel, with bared  
head

Grey, honoured for his father and himself,  
He touched the glimmering keyboard,  
touched the books

Those dear lost hands had touched so long  
ago.

“ Strange that these poor inanimate things  
outlast

The life that used them.

Yes. I should like to try  
This good old friend of his. You'll leave  
me here

An hour or so ? ”

His hands explored the stops ;  
And, while the music breathed what else  
were mute,

His mind through many thoughts and  
memories ranged.

Picture on picture passed before him  
there

In living colours, painted on the gloom :

Not what the world acclaimed, the great  
work crowned,

But all that went before, the years of toil ;  
The years of infinite patience, hope, despair.

He saw the little house where all began,  
His father's first resolve to explore the  
sky,

His first defeat, when telescopes were  
found

Too costly for a music-master's purse ;  
And then that dogged and all-conquering  
will

Declaring, " Be it so. I'll make my own,  
A better than even the best that Newton  
made."

He saw his first rude telescope—a tube  
Of pasteboard, with a lens at either end ;  
And then,—that arduous growth to size  
and power

With each new instrument, as his know-  
ledge grew ;

And, to reward each growth, a deeper  
heaven.



He saw the good Aunt Caroline's dismay  
When her trim drawing-room, as by wizardry, turned  
Into a workshop, where her brother's  
hands  
Cut, ground and burnished, hour on aching  
hour,  
Month after month, new mirrors of the  
sky.

Yet, while from dawn to dark her brother  
moved  
Around some new-cut mirror, burnishing it,  
Knowing that if he once removed his  
hands  
The surface would be dimmed and must  
forego  
Its heaven for ever, her quiet hands would  
raise  
Food to his lips ; or, with that musical  
voice  
Which once—for she, too, offered her  
sacrifice—

Had promised her fame, she whiled away  
the hours

Reading how, long ago, Aladdin raised  
The djinns, by burnishing that old battered lamp ;

Or, from Cervantes, how one crazy soul  
Tilting at windmills, challenged a purblind  
world.

He saw her seized at last by that same  
fire,

Burning to help, a sleepless Vestal, dowered  
With lightning-quickness, rushing from  
· desk to clock,

Or measuring distances at dead of night  
Between the lamp-micrometer and his  
eyes.

He saw her in mid-winter, hurrying out,  
A slim shawled figure through the drifted  
snow,

To help him ; saw her fall with a stifled  
cry,

Gashing herself upon that buried hook,  
And struggling up, out of the blood-stained  
    drift,  
To greet him with a smile.

“ For any soldier,  
This wound,” the surgeon muttered, “ would  
    have meant  
Six weeks in hospital.”

Not six days for her !  
“ I am glad these nights were cloudy, and  
    we lost  
So little,” was all she said.

Sir John pulled out  
Another stop. A little ironical march  
Of flutes began to goose-step through the  
    gloom.

He saw that first “ success ” ! Ay, call it  
    so !

The royal command,—the court desires to  
    see

The planet Saturn and his marvellous rings  
On Friday night. The skies, on Friday  
    night,

Were black with clouds. “Canute me no  
Canutes,”  
Muttered their new magician, and un-  
packed  
His telescope. “You shall see what you  
can see.”  
He levelled it through a window; and  
they saw  
“Wonderful! Marvellous! Glorious!  
Eh, what, what!”  
A planet of paper, with a paper ring,  
Lit by a lamp, in a hollow of Windsor  
Park,  
Among the ferns, where Herne the Hunter  
walks,  
And Falstaff found that fairies live on  
cheese.  
Thus all were satisfied; while, above the  
clouds—  
The thunder of the pedals reaffirmed—  
The Titan planet, every minute, rolled  
Three hundred leagues upon his awful  
way.

Then, through that night, the *vox humana*  
spoke  
With deeper longing than Lucretius knew  
When, in his great third book, the sombre  
chant  
Kindled and soared on those exultant  
wings,  
Praising the master's hand from which he,  
too,  
—Father, discoverer, hero—caught the fire.  
It spoke of those vast labours, incomplete,  
But, through their incompleteness, infinite  
In beauty, and in hope; the task be-  
queathed  
From dying hand to hand.

Close to his grave

Like a *memento mori* stood the hulk  
Of that great weapon rusted and out-  
worn,  
Which once broke down the barriers of the  
sky.  
“*Perrupit claustra*”; yes, and bridged  
their gulfs;

For, far beyond our solar scheme, it  
showed

The law that bound our planets binding  
still

Those coupled suns which year by year he  
watched

Around each other circling.

Had our own  
Some distant comrade, lost among the  
stars ?

Should we not, one day, just as Kepler  
drew

His planetary music and its laws  
From all those faithful records Tycho  
made,

Discern at last what vaster music rules  
The vaster drift of stars from deep to deep ;  
Around what awful Poles, those wisps of  
light

Those fifteen hundred universes move ?  
One signal, even now, across the dark,  
Declared their worlds confederate with our  
own ;

For, carrying many secrets, which we now  
Slowly decipher, one swift messenger comes  
Across the abyss . . .

The light that, flashing through the im-  
measurable,

From universe to universe proclaims  
The single reign of law that binds them all.  
We shall break up those rays and, in their  
lines

And colours, read the history of their stars.  
Year after year, the slow sure records  
grow,

Awaiting their interpreter. They shall see  
it,

Our sons, in that far day, the swift, the  
strong,

The triumphing young-eyed runners with  
the torch.

No deep-set boundary-mark in Space or  
Time

Shall halt or daunt them. Who that once  
has seen

How truth leads on to truth, shall ever  
dare

To set a bound to knowledge ?

“ Would that he knew ”

—So thought the visitant at that shadowy  
shrine—

“ Even as the maker of a song can hear  
With the soul’s ear, far off, the unstricken  
chords

To which, by its own inner law, it climbs,  
Would that my father knew how younger  
hands

Completed his own planetary tune ;  
How from the planet that his own eyes found  
The mind of man would plunge into the  
dark,

And, blindfold, find without the help of  
eyes

A mightier planet, in the depths beyond.”

Then, while the reeds, with quiet melodious  
pace

Followed the dream, as in a picture passed,



Adams, the boy at Cambridge, making his  
vow

By that still lamp, alone in that deep night,  
Beneath the crumbling battlements of St  
John's,

To know why Uranus, uttermost planet  
known,

Moved in a rhythm delicately astray  
From all the golden harmonies ordained  
By those known measures of its sister-  
worlds.

Was there an unknown planet, far beyond,  
Sailing through unimaginable deeps  
And drawing it from its path ?

Then challenging chords  
Echoed the prophecy that Sir John had  
made,

Guided by his own faith in Newton's law :  
*We have not found it, but we feel it trembling  
Along the lines of our analysis now  
As once Columbus, from the shores of Spain,  
Felt the new Continent.*

Then, in swift fugues, began

A race between two nations for the prize  
Of that new world.

Le Verrier in France,  
Adams in England, each of them unaware  
Of his own rival, at the selfsame hour  
Resolved to find it.

Not by the telescope now !  
Skies might be swept for æons ere one  
    spark  
Among those myriads were both found  
    and seen  
To move, at that vast distance round our  
    sun.  
They worked by faith in law alone. They  
    knew  
The wanderings of great Uranus, and they  
    knew  
The law of Newton.

By the midnight lamp,  
Pencil in hand, shut in a four-walled  
    room,  
Each by pure thought must work his  
    problem out,—

Given that law, to find the mass and  
place  
Of that which drew their planet from his  
course.

There were no throngs to applaud them.  
Each alone,

Without the heat of conflict laboured on,  
Consuming brain and nerve ; for throngs  
applaud

Only the flash and tinsel of their day,  
Never the quiet runners with the torch.  
Night after night they laboured. Line on  
line

Of intricate figures, moving all in law,  
They marshalled. Their long columns  
formed and marched  
From battle to battle, and no sound was  
heard

Of victory or defeat. They marched  
through snows  
Bleak as the drifts that broke Napoleon's  
pride

And through a vaster desert. They drilled  
their hosts

With that divine precision of the mind  
To which one second's error in a year  
Were anarchy, that precision which is felt  
Throbbing through music.

Month on month they toiled,  
With worlds for ciphers. One rich autumn  
night

Brooding over his figures there alone  
In Cambridge, Adams found them moving  
all

To one solution. To the unseeing eye  
His long neat pages had no more to tell  
Than any merchant's ledger, yet they  
shone

With epic splendour, and like trumpets  
pealed ;

*Three hundred million leagues beyond the  
path*

*Of our remotest planet, drowned in night  
Another and a mightier planet rolls ;  
In volume, fifty times more vast than earth,*

*And of so huge an orbit that its year  
Wellnigh outlasts our nations. Though it  
moves*

*A thousand leagues an hour, it has not  
ranged*

*Thrice through its seasons since Columbus  
sailed,*

*Or more than once since Galileo died.*

He took his proofs to Greenwich. "Sweep  
the skies

Within this limited region now," he said.

"You'll find your moving planet. I'm  
not more

Than one degree in error."

He left his proofs ;

But Airy, king of Greenwich, looked  
askance

At unofficial genius in the young,

And pigeon-holed that music of the spheres.

Nine months he waited till Le Verrier, too,  
Pointed to that same region of the sky.

Then Airy, opening his big sleepy lids,

Bade Challis use his telescope,—too late,  
To make that honour all his country's own ;  
For all Le Verrier's proofs were now with  
Galle

Who, being German, had his star-charts  
ready

And, in that region, found one needle-  
point

Had moved.    A monster planet !

Honour to France !

Honour to England, too, the cry began,  
Who found it also, though she drowsed at  
Greenwich.

So—as the French said, with some sting  
in it—

“ We gave the name of Neptune to our  
prize

Because our neighbour England rules the  
sea.”

“ Honour to all,” say we ; for, in these  
wars,

Whoever wins a battle wins for all.

But, most of all, honour to him who  
found

The law that was a lantern to their feet,—  
Newton, the first whose thought could  
soar beyond

The bounds of human vision and declare,  
“ Thus saith the law of Nature and of God  
Concerning things invisible.”

This new world

What was it but one harmony the more  
In that great music which himself had  
heard,—

The chant of those reintegrated spheres  
Moving around their sun, while all things  
moved

Around one deeper Light, revealed by law,  
Beyond all vision, past all understanding,  
Yet darkly shadowed forth for dreaming  
men

On earth in music . . .

Music, all comes back,

To music in the end.

Then, in the gloom

Of the Octagon Chapel, the dreamer lifted  
up

His face, as if to all those great fore-  
bears.

The quivering organ rolled upon the  
dusk

His dream of that new symphony,—the  
sun

Chanting to all his planets on their way

While, stop to stop replying, height o'er  
height,

His planets answered, voices of a dream :

THE SUN.

Light, on the far faint planets that attend  
me !

Light ! But for me—the fury and the  
fire.

My white-hot maelstroms, the red storms  
that rend me

• Can yield them still the harvest they  
desire.



I kiss with light their sunward-lifted faces.

With dew-drenched flowers I crown their  
dusky brows.

They praise me, lightly, from their pleasant  
places.

Their birds belaud me, lightly, from  
their boughs.

And men, on lute and lyre, have breathed  
their pleasure.

They have watched Apollo's golden  
chariot roll ;

Hymned his bright wheels, but never mine  
that measure

A million leagues of flame from Pole to  
Pole.

Like harbour-lights the stars grow wide  
before me,

I draw my worlds ten thousand leagues  
a day.

Their far blue seas like April eyes adore me.

They follow, dreaming, on my soundless  
way.

How should they know, who wheel around  
    my burning,  
    What torments bore them, or what  
    power am I,  
I, that with all those worlds around me  
    turning,  
    Sail, every hour, from sky to unplumbed  
    sky ?

My planets, these live embers of my  
    passion,  
    These children of my hurricanes of  
    flame,  
Flung thro' the night, for midnight to  
    refashion,  
    Praise, and forget, the splendour whence  
    they came.

THE EARTH.

*Was it a dream that, in those bright dominions,  
    Are other worlds that sing, with lives like  
    mine,*

*Lives that with beating hearts and broken  
pinions*

*Aspire and fall, half-mortal, half-divine ?*

*A grain of dust among those glittering  
legions—*

*Am I, I only, touched with joy and tears ?*

*O, silver sisters, from your azure regions,*

*Breathe, once again, your music of the  
spheres :—*

VENUS.

A nearer sun, a rose of light arises,

To clothe my glens with richer clouds of  
flowers,

To paint my clouds with ever new sur-  
prises

And wreathe with mist my rosier domes  
and towers ;

Where now, to praise their gods, a throng  
assembles

Whose hopes and dreams no sphere but  
mine has known.

On other worlds the same warm sunlight  
trembles ;  
But life, love, worship, these are mine  
alone.

MARS.

And now, as dewdrops in the dawn-light  
glisten,  
Remote and cold—see—Earth and Venus  
roll.  
We signalled them—in music ! Did they  
listen ?  
Could they not hear those whispers of  
the soul ?

May not their flesh have sealed that fount  
of glory,  
That pure ninth sense which told us of  
mankind ?  
Can some deep sleep bereave them of our  
story  
As darkness hides all colours from the  
blind ?

## JUPITER.

I that am sailing deeper skies and dimmer,  
Twelve million leagues beyond the path  
of Mars,  
Salute the sun, that cloudy pearl, whose  
glimmer  
Renews my spring and steers me through  
the stars.

Think not that I by distances am dark-  
ened.

My months are years ; yet light is in  
mine eyes.

Mine eyes are not as yours. Mine ears  
have hearkened

To sounds from earth. Five moons  
enchant my skies.

## SATURN.

And deeper yet, like molten opal shining  
My belt of rainbow glory softly streams,

And seven white moons around me inter-  
twining

Hide my vast beauty in a mist of  
dreams.

Huge is my orbit ; and your flickering  
planet

A mote that flecks your sun, that faint  
white star ;

Yet, in my magic pools, I still can  
scan it ;

For I have ways to look on worlds afar.

. .

URANUS.

And deeper yet—twelve million leagues of  
twilight

Divide mine empire even from Saturn's  
ken.

Is there a world whose light is not as my  
light,

.  
A midget world of light-imprisoned  
men ?

Shut from this inner vision that hath  
found me,

They hunt bright shadows, painted to  
betray ;

And know not that, because their night  
hath drowned me,

My giants walk with gods in boundless  
day.

NEPTUNE.

Plunge through immensity anew and find  
me.

Though scarce I see your sun,—that  
dying spark—

Across a myriad leagues it still can bind  
me

To my sure path, and steer me through  
the dark.

I sail through vastness, and its rhythms  
hold me,

Though threescore earths could in my  
volume sleep !

Whose are the might and music that  
enfold me ?

Whose is the law that guides me thro'  
the Deep ?

THE SUN.

*I hear their song. They wheel around my  
burning !*

*I know their orbits ; but what path have I ?  
I that with all those worlds around me turning  
Sail, every hour, ten thousand leagues of  
sky ?*

*My planets, these live embers of my passion,  
And I, too, filled with music and with  
flame,*

*Flung thro' the night, for midnight to  
refashion,*

*Praise and forget the splendour whence  
we came.*



## EPILOGUE.

ONCE more upon the mountain's lonely  
height

I woke, and round me heard the sea-like  
sound

Of pine-woods, as the solemn night-wind  
washed

Through the long canyons and precipitous  
gorges

Where coyotes moaned and eagles made  
their nest.

Once more, far, far below, I saw the  
lights

Of distant cities, at the mountain's feet,  
Clustered like constellations . . .

Over me, like the dome of some strange  
shrine,

Housing our great new weapon of the sky,

And moving on its axis like a moon  
Glimmered the new Uraniborg.

Shadows passed  
Like monks, between it and the low grey  
walls  
That lodged them, like a fortress in the  
rocks,  
Their monastery of thought.

A shadow neared me.  
I heard, once more, an eager living voice :

“Year after year, the slow sure records grow.

I wish that old Copernicus could see  
How, through his truth, that once dis-  
pelled a dream,

Broke the false axle-trees of heaven,  
destroyed

All central certainty in the universe,  
And seemed to dwarf mankind, the spirit  
of man

Laid hold on law, that Jacob's-ladder of  
light,

And mounting, slowly, surely, step by  
step,

Entered into its kingdom and its power.

For just as Tycho's tables of the stars

Within the bounds of our own galaxy

Led Kepler to the music of his laws,

So, father and son, the Herschels, with  
their charts

Of all those fire-mists, those faint nebulae,

Those hosts of drifting universes, lead

Our new discoverers to yet mightier laws

Enthroned above all worlds.

We have not found them,  
And yet—only the intellectual fool  
Dreams in his heart that even his brain  
can tick

In isolated measure, a centre of law,

Amidst the whirl of universal chaos.

For law descends from law. Though all  
the spheres

Through all the abysmal depths of Space  
were blown

Like dust before a colder darker wind

Than even Lucretius dreamed, yet if one  
thought,

One gleam of law within the mind of man,  
Lighten our darkness, there's a law beyond ;  
And even that tempest of destruction  
moves

To a mightier music, shatters its myriad  
worlds

Only to gather them up, as a shattered  
wave

Is gathered again into a rhythmic sea,  
Whose ebb and flow are but the pulse of  
Life,

In its creative passion.

The records grow

Unceasingly, and each new grain of truth  
Is packed, like radium, with whole worlds  
of light.

.

The eclipses timed in Babylon help us now  
To clock that gradual quickening of the  
moon,

Ten seconds in a century.

Who that wrote

On those clay tablets could foresee his  
    gift  
To future ages ; dreamed that the groping  
    mind,  
Dowered with so brief a life, could ever  
    range  
With that divine precision through the  
    abyss ?  
Who, when that good Dutch spectacle-  
    maker set  
Two lenses in a tube, to read the time  
Upon the distant clock-tower of his  
    church,  
Could dream of this, our hundred-inch,  
    that shows  
The snow upon the polar caps of Mars  
Whitening and darkening as the seasons  
    change ?  
Or who could dream when Galileo watched  
His moons of Jupiter, that from their  
    eclipses  
And from that change in their appointed  
    times,

Now late, now early, as the watching  
earth

Farther or nearer on its orbit rolled,  
The immeasurable speed of light at last  
Should be reduced to measure ?

Could Newton dream  
When, through his prism, he broke the  
pure white shaft

Into that rainbow band, how men should  
gather

And disentangle ray by delicate ray  
The colours of the stars,—not only those  
That burn in heaven, but those that long  
since perished,

Those vanished suns that eyes can still  
behold,

The strange lost stars whose light still  
reaches earth

Although they died ten thousand years  
ago.

Here, night by night, the innumerable  
heavens

Speak to an eye more sensitive than man's,

Write on the camera's delicate retina  
A thousand messages, lines of dark and  
    bright  
That speak of elements unknown on earth.  
How shall men doubt, who thus can read  
    the Book  
Of Judgment, and transcend both Space  
    and Time,  
Analyse worlds that long since passed away,  
And scan the future, how shall they doubt  
    His power  
From whom their power and all creation  
    came ? ”

I think that, when the second Herschel  
    tried  
Those great hexameters in our English  
    tongue,  
A nobler shield than ever Achilles knew  
Shone through the song and made his  
    echoes live :  
“ *There he depicted the earth, and the canopied  
    sky, and the sea-waves,*

*There the unwearied sun, and the full-orbed  
moon in their courses,  
All the configured stars that gem the circuit  
of heaven,  
Pleiads and Hyads were there and the giant  
force of Orion,  
There the revolving Bear, which the Wain  
they call, was ensculptured,  
Circling on high, and in all his courses  
regarding Orion,  
Sole of the starry train that descends not to  
bathe in the ocean."*

A nobler shield for us, a deeper sky ;  
But even to us who know how far away  
Those constellations burn, the wonder  
bides  
That each vast sun can speed through the  
abyss  
Age after age more swiftly than an eagle,  
Each on its different road, alone like ours  
With its own satellites ; yet, since Homer  
sang,



Their aspect has not altered ! All their  
flight

Has not yet changed the old pattern of  
the Wain.

The sword-belt of Orion is not sundered.  
Nor has one fugitive splendour broken yet  
From Cassiopeia's throne.

A thousand years  
Are but as yesterday, even unto these.  
How shall men doubt His empery over  
time

Whose dwelling is a deep so absolute  
That we can only find Him in our souls.  
For there, despite Copernicus, each may  
find

The centre of all things. There He lives  
and reigns.

There infinite distance into nearness grows,  
And infinite majesty stoops to dust again ;  
All things in little, infinite love in man . . .  
Oh, beating wings, descend to earth once  
more,

And hear, reborn, the desert singer's cry :

*When I consider the heavens, the work of  
Thy fingers,  
The sun and the moon and the stars which  
Thou hast ordained,  
Though man be as dust, I know Thou art  
mindful of him ;  
And, through Thy law, Thy light still visiteth  
him.*

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